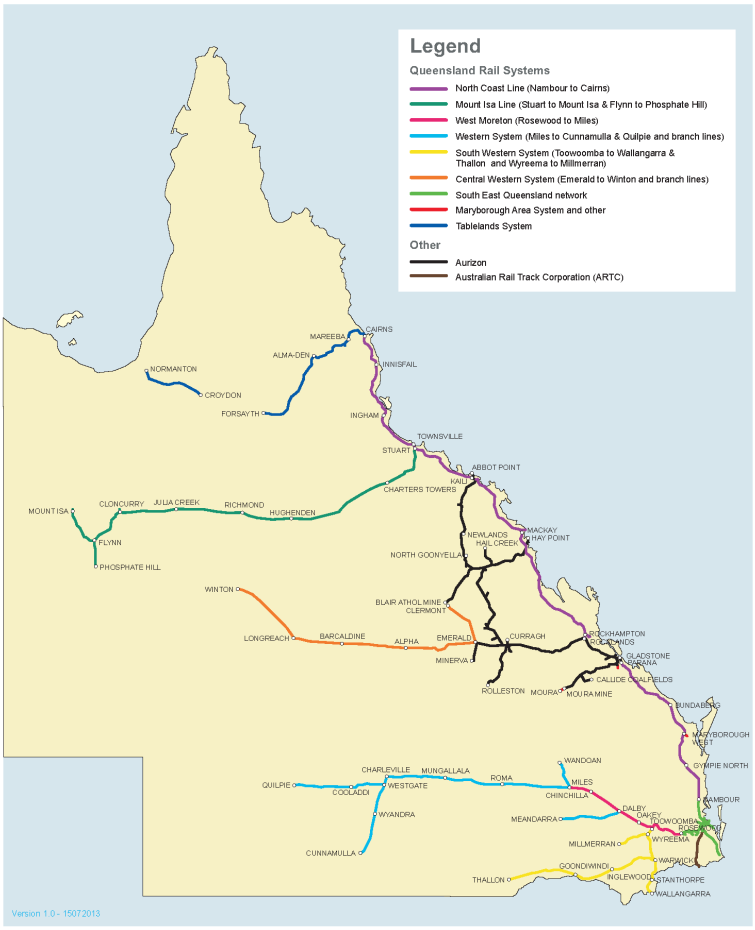
North Coast Line System South

Information Pack

Nambour to Parana



Version 4.0
May 2024

QueenslandRail

Version Information

Version 4.0: 21/05/2024

- Complete review and update

Version 3.0: 05/10/2016

Table of Contents

Introduction

The detail provided in this pack relates to infrastructure and operational information necessary to develop an Access Application. This information is indicative of the network sufficient for developing a concept. However, critical details will need to be confirmed by Queensland Rail.

It is envisaged that Access Seekers will liaise closely with Queensland Rail Limited (Queensland Rail) to formulate a detailed operation specification as part of a full access agreement negotiation. Operational parameters outlined in this pack may be varied by mutual agreement with Queensland Rail.

All Rail Transport Operators wishing to operate in Queensland require accreditation in accordance with the Rail Safety National Law (RSNL) and need to consider, including but not limited to, the following aspects of typical rail operations:

- Provisioning, stabling or stowing areas for rollingstock
- Train crewing
- Safeworking
- Training
- Route knowledge
- Environmental requirements
- Track standards
- Signalling and traction systems, standards and constraints
- Safety training
- Management of risk
- Rollingstock registration and Train authorisation
- Legal issues as contained in Queensland Rail's Access Undertaking, Access Agreements and information contained in this pack.

Rail Transport Operators will be required to be accredited by Office of the National Rail Safety Regulator (ONRSR), hold an Access Agreement with Queensland Rail and meet any conditions and precedents specified in the Access Agreement prior to commencing operations.

Accreditation means an applicant has confirmed that they are able to meet the requirements to carry out rail operations. ONRSR must be satisfied that the applicant has demonstrated:

- Effective management and control of rollingstock
- Competence and capacity to manage risks to safety associated with railway operations
- Competence and capacity to implement the required safety management system and has met the legislative requirements
- Financial capacity, or public risk insurance arrangements for potential liabilities

Contact details for ONRSR are:

Brisbane
T. 1800 531 982
Level 7, 410 Ann Street
Brisbane QLD 4000

PO Box 3461, Rundle Mall
Adelaide SA 5000
onrsr.com.au

Rail Transport Operators need to be aware of and comply with other general legislation, including but not limited to Workplace Health & Safety, environmental and heritage legislation.

This Information Pack is an UNCONTROLLED DOCUMENT and is provided for information purpose only. Queensland Rail does not make any representation or warranty, express or implied, as to the accuracy, suitability or completeness of the information. To the extent that any inconsistency arises between this Information Pack and the Access Agreement or Queensland Rail's Access Undertaking, the provisions of the Access Agreement and Queensland Rail's Access Undertaking shall prevail.

General Information

The North Coast Line is located alongside coastal Queensland between Cairns (16°55' S - 145°46' E) in the north and Nambour (26°63' S - 152°95' E) in the south. The line extends over approximately 1400 km excluding sections of Aurizon Network between Parana and Rocklands in central Queensland and Kaili and Durroburra in north Queensland.

Due to the length of this System there will be two information packs, **SOUTH** - Nambour to Parana and **NORTH** - Rocklands to Cairns.

South

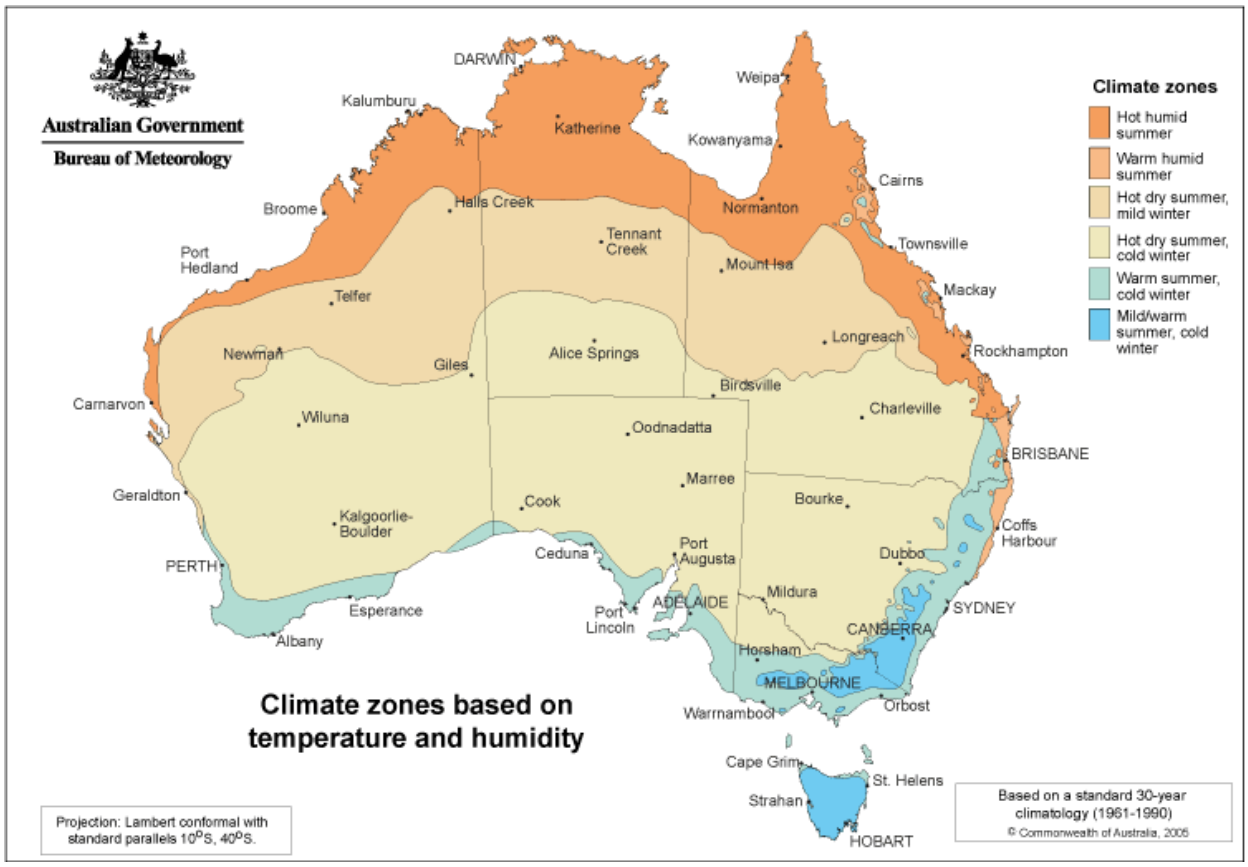
The North Coast line (South) System (NCL System South) carries the following:

- various freight products, including containerised and industrial freight, minerals, livestock and bulk commodities including sugar and grain
- containerised freight services operating between Brisbane and major centres in central and north Queensland, including Rockhampton, Mackay, Townsville and Cairns
- sugar traffic hauled from sugar mills to the Ports of Mackay and Townsville

Long distance passenger and high-speed Tilt Train services also operate on the line servicing central and north Queensland.

Descriptive distances within this document (unless otherwise stated) are based on physical kilometre posts in the field and are to be used only as location descriptors/chainage; they do not compensate for equalities resulting from deviations. Access charges and performance statistics are generated using actual through distances derived from relevant Working Plan and Sections and reflected on Line Code Diagrams. Generally, distances originate from the junction of the branch and commence at 0 km.

General Climate



The NCL System South has a humid subtropical climate with hot, humid summers and pleasant mild winters.

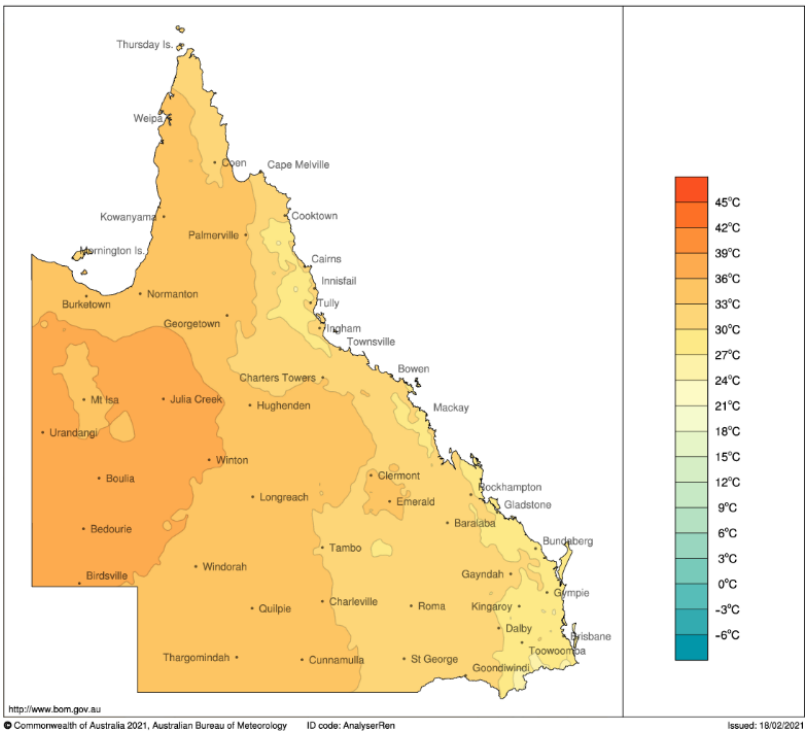
The following sub-sections specify general climatic parameters. For latest and more specific information potential Rail Transport Operators should consult the Australian Bureau of Meteorology at [Queensland Weather and Warnings (bom.gov.au)](bom.gov.au).

Temperature

Average maximum temperature on NCL System South is around 30°C in the summer months while minimum temperature in winter could drop to below 10°C. Some inland areas of Bundaberg sometimes experience frosts in winter.

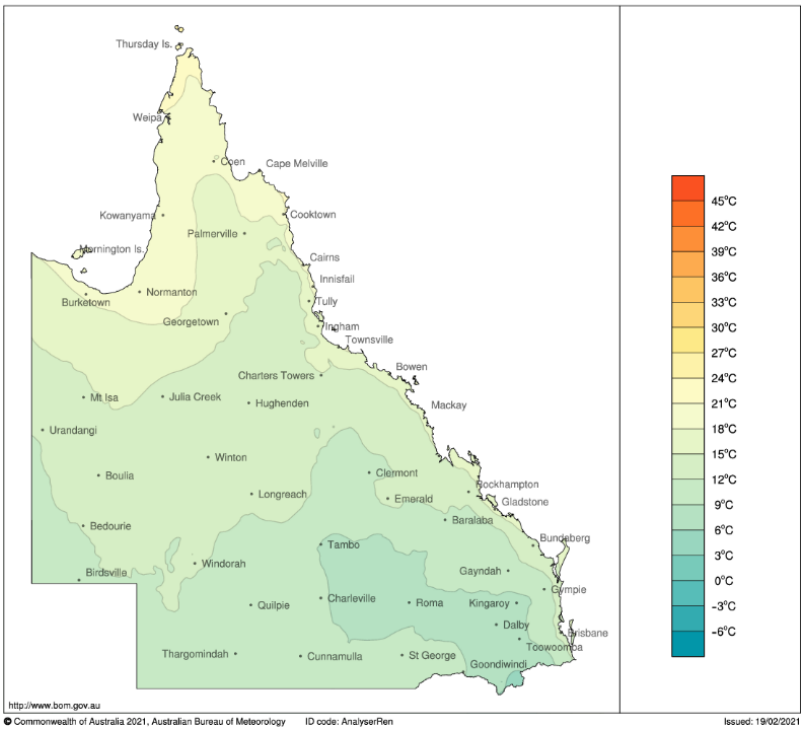
During periods of high temperature it may be an operational requirement to impose temporary speed restrictions – heat restrictions (reducing the train operating speed) over various sections of the track to minimise the risk of incident.

Average Oct to Apr max. temperature 30-year climatology (1991 to 2020)
Australian Bureau of Meteorology



Issued: 18/02/2021

Average Apr to Oct min. temperature 30-year climatology (1991 to 2020)
Australian Bureau of Meteorology



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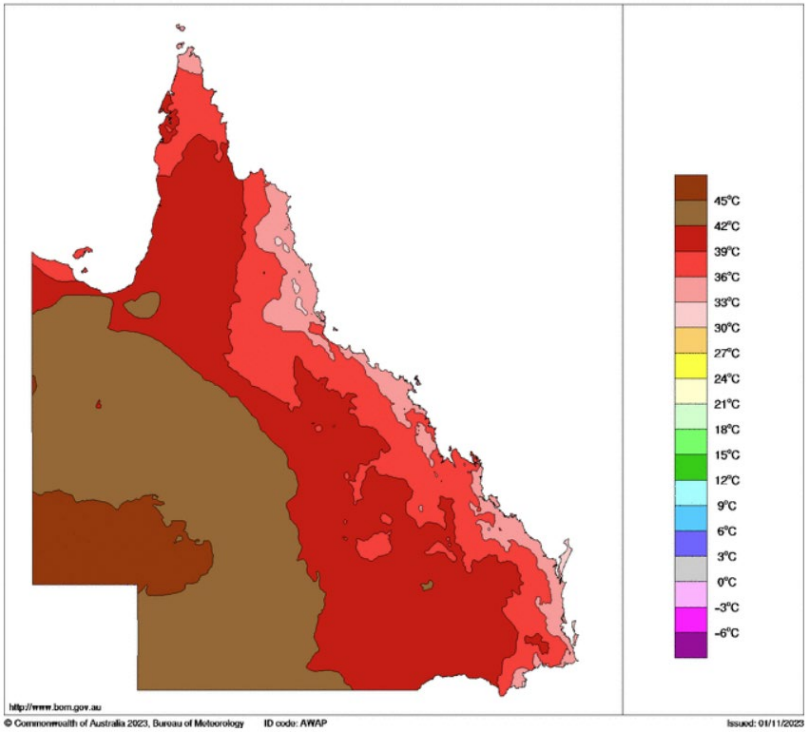
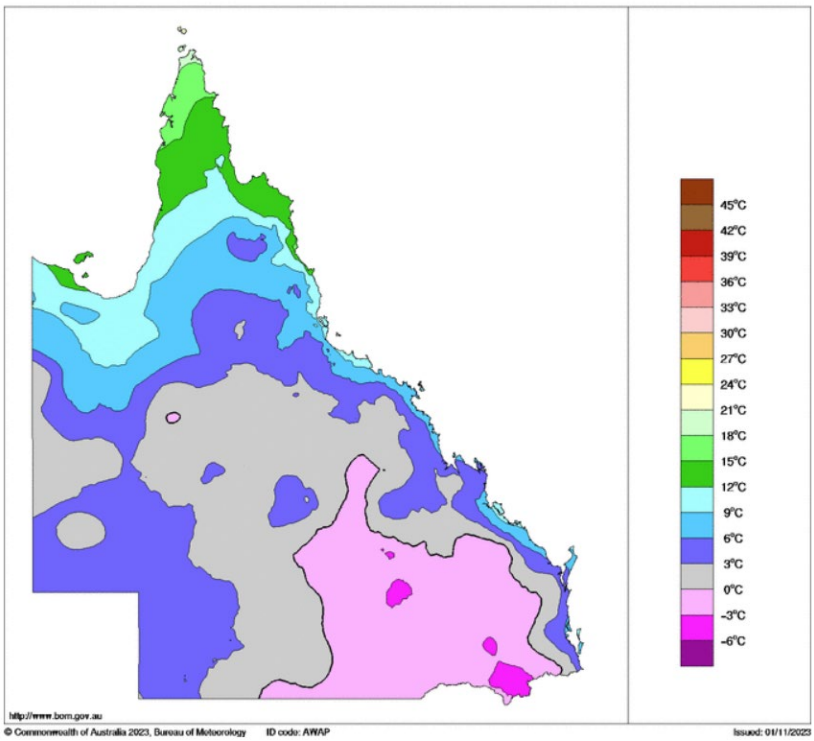
Highest Maximum Temperature (°C) 1 November 2022 to 31 October 2023
Australian Bureau of Meteorology



Lowest Minimum Temperature (°C) 1 November 2022 to 31 October 2023
Australian Bureau of Meteorology



Humidity

This region can experience prolonged periods of high humidity and potential Rail Transport Operators should consider this when planning/designing for rollingstock and machinery to operate on this System.

Rainfall

The wet season in Queensland is predominantly from December to March. Gympie receives an average daily rainfall of 3.1 mm, ranking it among the top 16% for the Wide Bay region in terms of precipitation.

Flooding of low-lying areas is likely to occur as an indirect result of cyclones and heavy coastal rains when streams and rivers that rise near the coast flow inland.

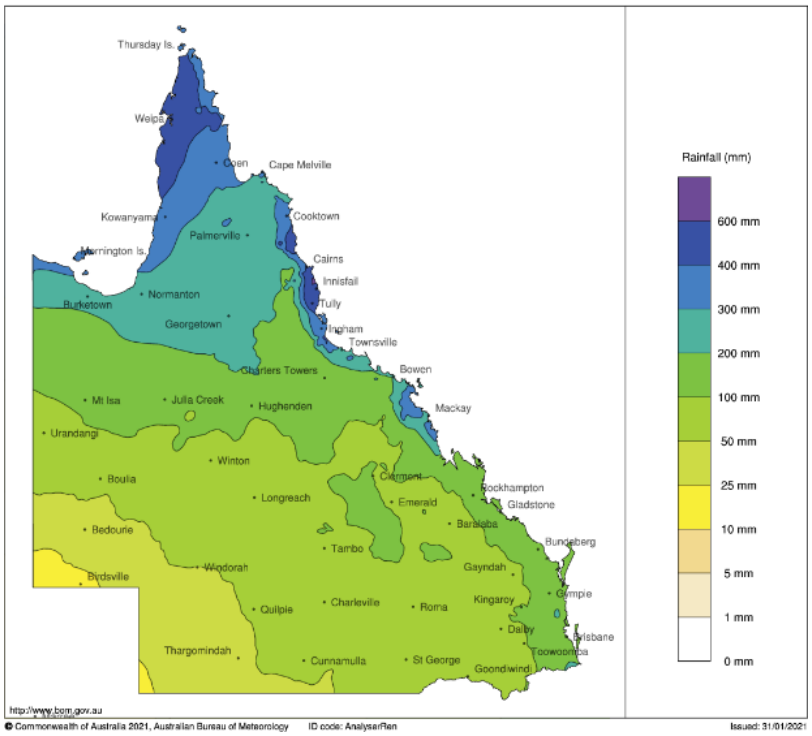
Cyclone

Tropical lows, which develop from November to April, occasionally deepen to cause tropical cyclones. Tropical cyclones frequently foster high winds, heavy flood-producing rainfall (especially when a cyclone moves over high ground), and coastal storm surges.

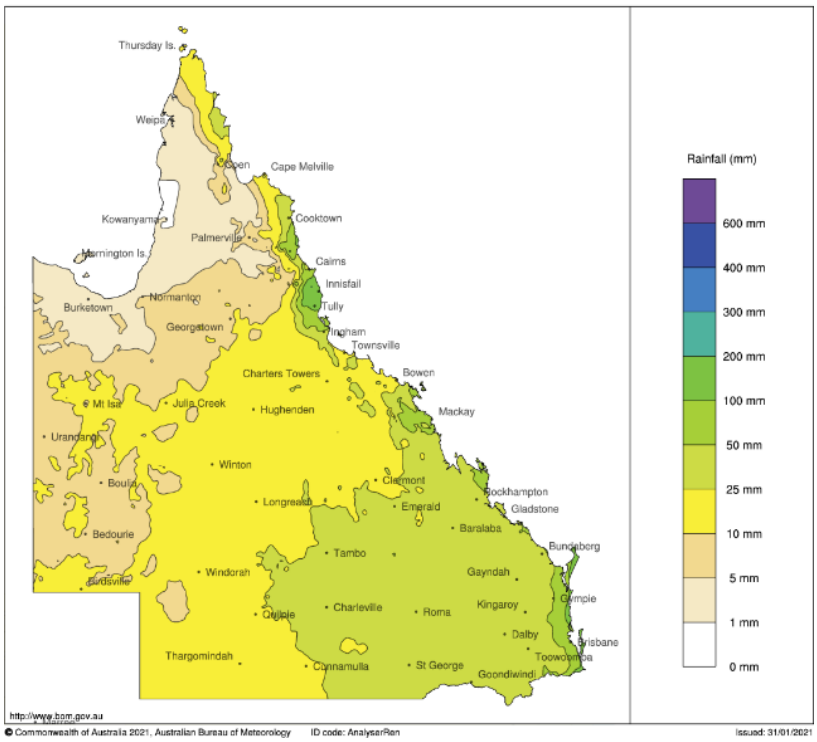
Cyclones have the capability of affecting the entire North Coast Line due to “knock on” affects, although not all cyclones are severe. The high wind risk does not usually extend further inland than 50 km. Inland movement reduces the inflow of moisture and cyclone intensity declines, often within a few hours.

Tropical lows that do not intensify into cyclones, or lows that are the remnants of older cyclones, can still produce damaging winds, widespread rainfall, and dangerous flooding. These impacts can extend beyond the tropics into southern areas of the country.

Average January rainfall 30-year climatology (1991 to 2020)
Australian Bureau of Meteorology

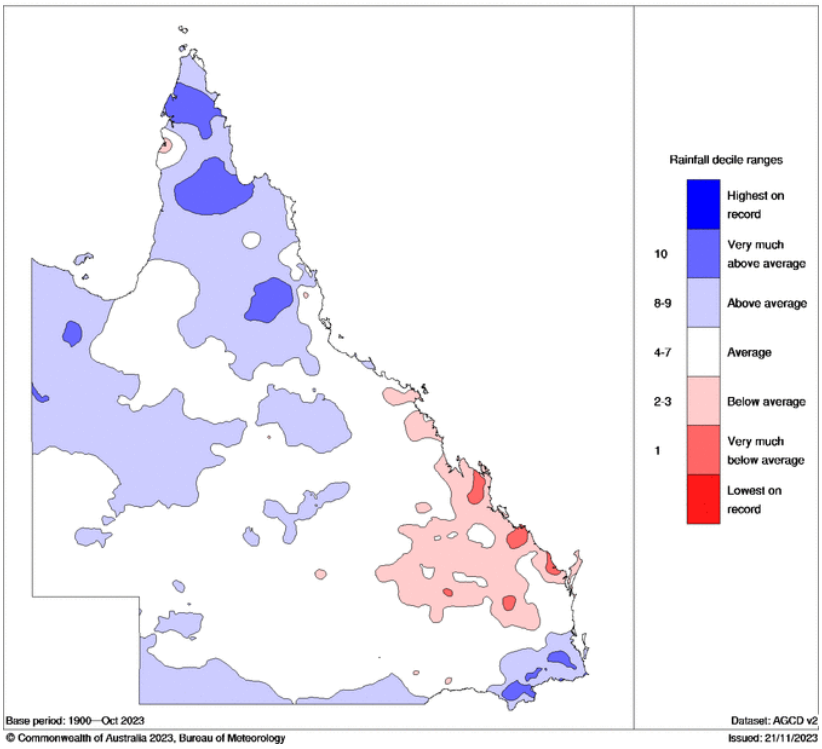


Average June rainfall 30-year climatology (1991 to 2020)
Australian Bureau of Meteorology



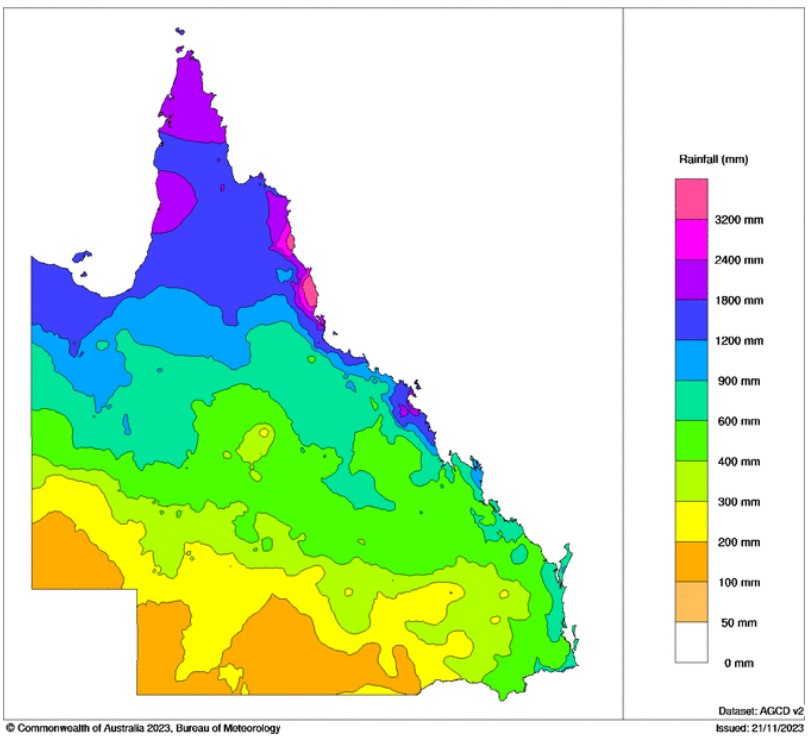
Queensland rainfall deciles 1 November 2019 to 31 October 2023

Australian Gridded Climate Data



Queensland total rainfall (mm) 1 November 2022 to 31 October 2023

Australian Gridded Climate Data



Description of the Railway

Information on track, rollingstock, train operations, freight and container operations on this System are contained in *MD-10-533 Operational Route Manual*.

The maximum permissible speeds through the divergent road of turnouts are governed by the angle of that turnout as follows:

Angle of Turnout	Max Speed
1 in 12 tangential	40 km/h
1 in 16 tangential and conventional	50 km/h
1 in 25 tangential with swing nose	80 km/h
All other turnouts	25 km/h

In general, curves (with the exception of turnout curves from the divergent road) are transitioned.

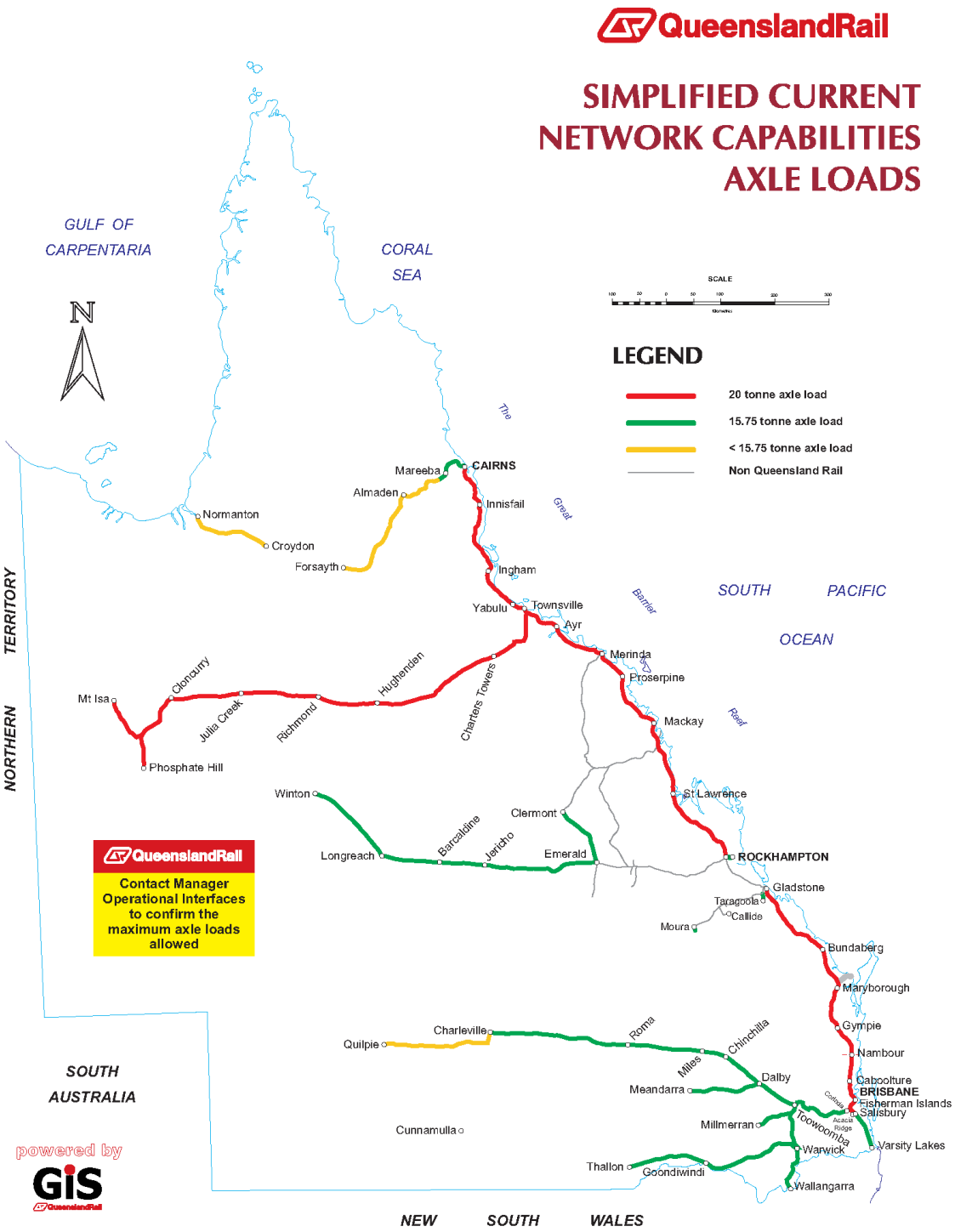
Basic Track Configuration

Basic track configuration is detailed in APPENDIX B - SCHEMATIC LAYOUT.

Track Data and Grade Diagrams for the major routes are included in APPENDIX E.

Axle Loadings

The main line and passing loops are rated at a maximum axle load of 20 t. As well as maximum load, axle spacings also need to comply with Module 2 of *MD-10-194 Interface standards*. Some sidings and/or yards may be rated at less than 20 t axle load.



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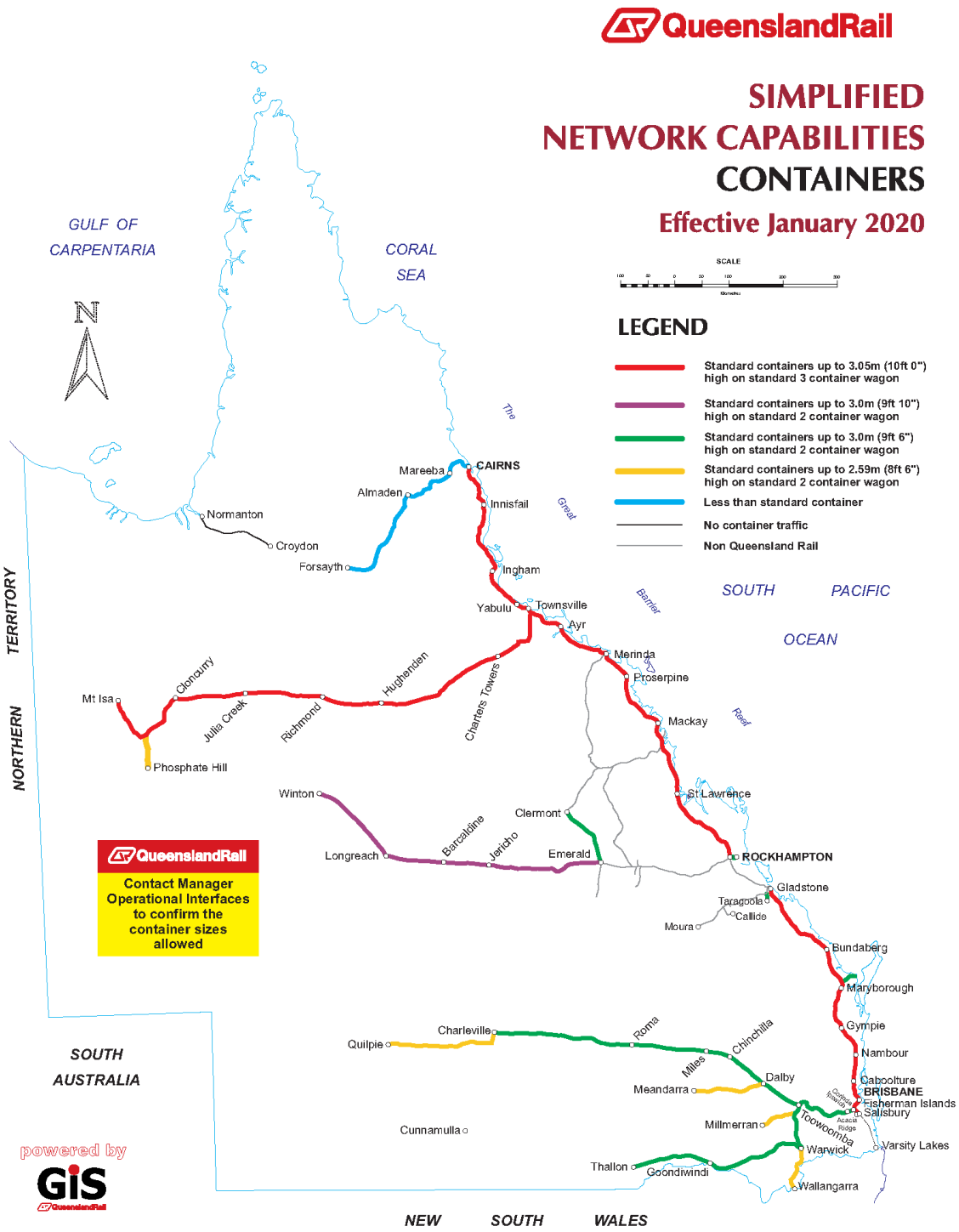
Based MD-10-533 (Version 5.0)
Last Schematic Update - 13th September 2019

10/2023 - 3



X:_GIS_GRAPHICS\CORELDRAW\SIMPLIFIED CURRENT NETWORK CAPABILITIES_CONTAINERS.cdr
Last Schematic Update - 26th September 2019

10/2023 - 5

Nambour to Bundaberg

Nambour (elevation 16 m) defines the northern extent of the South East Queensland Network.

From Nambour the NCL System South heads north along the coastal plain to Cooroy (elevation 110 m), continuing on through Maryborough West (junction for Maryborough Branch), Colton (elevation 39 m and junction for the Takura Branch) before heading north west to Bundaberg (elevation 11 m).

Corridor			Nambour to Bundaberg
Line Section Code			401, 724, 725, 726, 727, 728, 729, 105, 446, 419, 122
No. of Tracks			1
Route Km			216.1
Track Km			216.1
Electrified			Yes
Safeworking System			RCS[1]/ATC[2]/ATP[3]
Control Centre			RMC[4]/Brisbane
Crossing Loops	No.		33
	Location and length		Yandina (723pp[5]), North Arm (710pp), Sunrise (857pp), Cooroy (905pp), Pomona (682pp), Cooran (921pp), Traveston (804pp), Woondum (734pp), Glanmire (700pp), Gympie North (681pp), Tamaree (756pp), Harvey's Siding (862pp), Curra (733pp), Theebine (697pp), Paterson (694pp), Gundiah (878pp), Netherby (706pp), Tiaro - Loop (471pp), Tiaro - Main (532pp), Owanyilla (715pp), Mungar - Loop (726pp), Mungar - Main (647pp), Yengarie (596pp), Maryborough West (700pp), Colton - Loop (723pp), Colton - Main (691pp), Torbanlea (699pp), Howard (712pp), Wokka (694pp), Isis Jct (711pp), Goodwood (704pp), Kinkuna (754pp), Elliott (723pp)
Bridges	Timber	No. of Bridges	4
		No. of Spans	39
		Length (m)	234
	Steel	No. of Bridges	7
		No. of Spans	52
		Length (m)	744
	Concrete	No. of Bridges	53
		No. of Spans	244
		Length (m)	4030
No. of Overbridges	Timber		6
	Steel		0
	Concrete		13
Tunnels	Number		0
	Length (m)		0

[1] Remote Controlled Signalling
[2] Automatic Train Control
[3] Automatic Train Protection
[4] Rail Management Centre
[5] Power Points

Corridor		Nambour to Bundaberg
Curves (% of total track)	<80 km/h	10
	<60 km/h	3
Maximum Allowable Axle Load (tal)		20
Track Structure	Rail Mass (kg/m)	47/50/53/60
	Jointed	CWR[6]
	Sleeper Type	Concrete 99%, Steel 1%
Max Container Height (m)		3.05
Allowable Gross Tonnes p.a. ('000)		10,000

The maximum allowable speed is 100 km/h for locomotive hauled stock, 120 km/h for Intercity Express train and 160 km/h for Tilt trains.

The maximum grade (not compensated for horizontal alignment) that a northbound (Down) train will encounter is 1 in 44 near Gundiah whilst for a southbound (Up) train, the maximum grade is 1 in 44 near Theebine.

Fencing along this corridor complements adjacent land usage and will be maintained at its current standard.

Bundaberg to Parana

From Bundaberg (elevation 11 m), on the banks of the Burnett River, the NCL System South heads north west to Parana (elevation 7 m), where the System connects with Aurizon Blackwater System.

The maximum allowable speed is 100 km/h for locomotive hauled stock, 120 km/h for Intercity Express trains and 160 km/h for Tilt trains.

The maximum grade (not compensated for horizontal alignment) that a southbound (Up) train will encounter is 1 in 50 whilst for a northbound (Down) train the maximum grade is 1 in 50, both at a number of locations along the route.

Corridor	Bundaberg to Parana
Line Section Code	730, 733, 217
No. of Tracks	1
Route Km	170.564
Track Km	170.564

[6] Continuous Welded Rail

Corridor			Bundaberg to Parana
Electrified			Yes
Safeworking System			RCS/ATP
Control Centre			Brisbane
Crossing Loops	No.		23
	Location and length		Bundaberg Main & Loop – BB16 to BB25 (1307pp), BB18 to BB23 (1242pp), BB16/18 to BB26/24 (693pp), BB15 to BB25 (375pp), BB17 to BB23 (310pp), BB51 to BB52 (310pp), 3rd Road (692pp), Meadowvale - Main (708pp), Meadowvale - Loop (708pp), 3rd Road (547pp), Avondale (701pp), Littabella (698pp), Flinders - Loop (823pp), Flinders - Main (795pp), Berajondo (744pp), Baffle (824pp), Irkanda (734pp), Netley (716pp), Miriam Vale (695pp), Bororen (724pp), Iveragh (903pp), Benaraby (698pp), Parana (908pp)
Bridges	Timber	No. of Bridges	6
		No. of Spans	48
		Length (m)	318
	Steel	No. of Bridges	9
		No. of Spans	105
		Length (m)	1542
	Concrete	No. of Bridges	33
		No. of Spans	129
		Length (m)	2174
No. of Overbridges	Timber		2
	Steel		0
	Concrete		2
Tunnels	Number		0
	Length (m)		0
Curves (% of total track)	<80 km/h		4
	<60 km/h		1
Maximum Allowable Axle Load (tal)			20
Track Structure	Rail Mass (kg/m)		47/50/53/60
	Jointed		CWR
	Sleeper Type		Concrete 99%, Steel 1%
Max Container Height (m)			3.05
Allowable Gross Tonnes p.a. ('000)			10,000

Fencing along this corridor complements adjacent land usage and will be maintained at its current standard.

Maryborough Branch and Auckland Point Branch

Below is some basic information about two branches on the NCL System South, one turns east from Maryborough West towards Maryborough Yard and Wharf, the other branches off Gladstone (elevation 4 m), which is a short journey from Parana via the Aurizon Blackwater System.

The maximum allowable speed is 40 km/h for the Maryborough Branch and 25 km/h for the Auckland Point Branch.

Corridor			Maryborough Branch	Auckland Point Branch
Line Section Code			111, 113, 482, 483, 493, 494	147, 601
No. of Tracks			1	Yard
Route Km			7.29	5.424
Track Km			7.29	5.424
Electrified			No	Yes
Safeworking System			RCS to the Home Signal	Token
Control Centre			Brisbane	Brisbane
Crossing Loops	No.		0	0
	Location and length			
Bridges	Timber	No. of Bridges	1	1
		No. of Spans	1	0
		Length (m)	9	0
	Steel	No. of Bridges	0	0
		No. of Spans	0	0
		Length (m)	0	0
	Concrete	No. of Bridges	1	0
		No. of Spans	2	0
		Length (m)	47	0
No. of Overbridges	Timber		1	0
	Steel		0	2
	Concrete		3	2
Tunnels	Number		0	0
	Length (m)		0	0
Curves (% of total track)	<80 km/h		12	0
	<60 km/h		9	40
Maximum Allowable Axle Load (tal)			15.75	15.75
Track Structure	Rail Mass (kg/m)		30/41/47	41/47
	Jointed		Jointed	B[7]/LWR[8]
	Sleeper Type		T[9] / S[10] / Low Profile Concrete	T
Max Container Height (m)				
Allowable Gross Tonnes p.a. ('000)				

[7] Bolted Fishplates
[8] Long Welded Rail
[9] Timber Sleeper
[10] Steel Sleeper

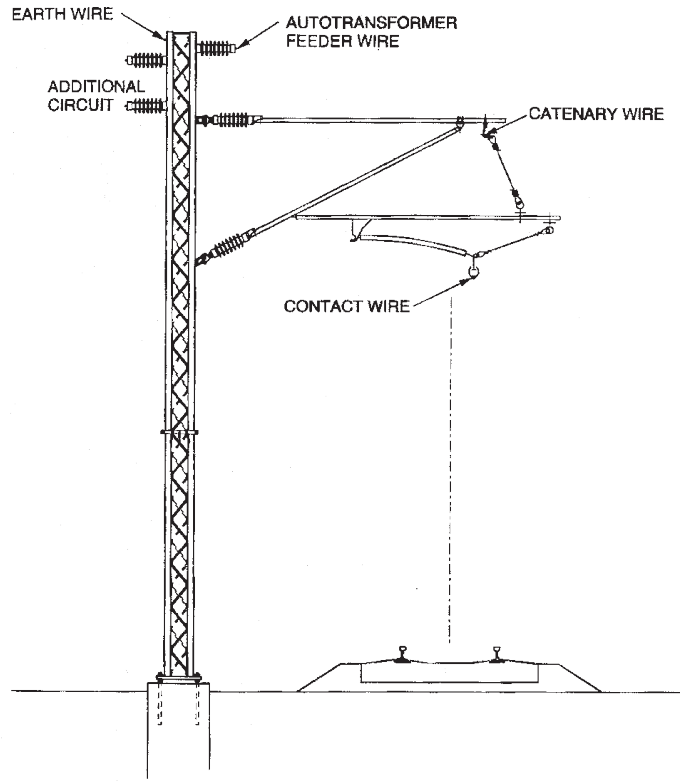
Overhead Line Equipment

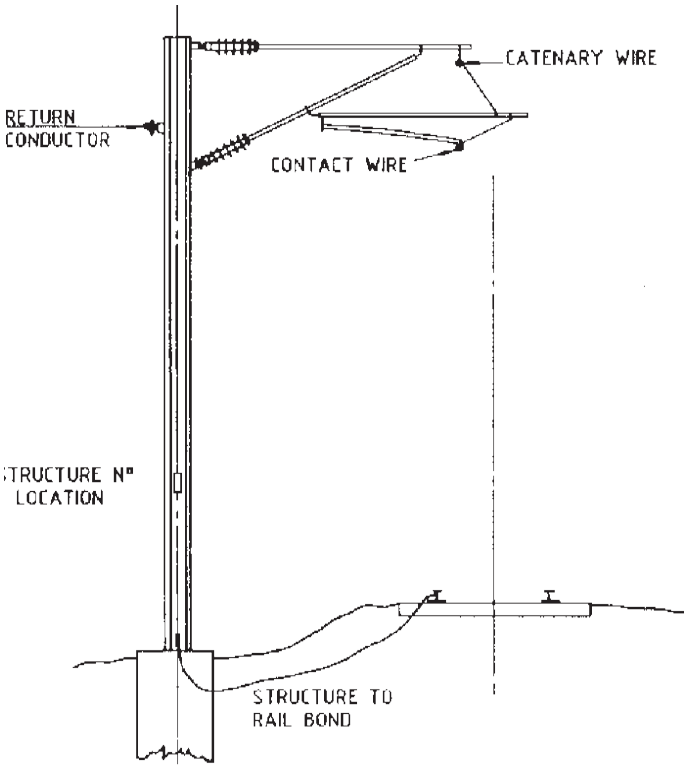
Queensland Rail's electrification system is run on Single Phase, Alternating Current, 25/50 kV at 50 Hertz supply to the Brisbane, Gold Coast and Central Queensland Regions. The supply is fed through the overhead line equipment to provide the electric rollingstock with power through a roof mounted pantograph.

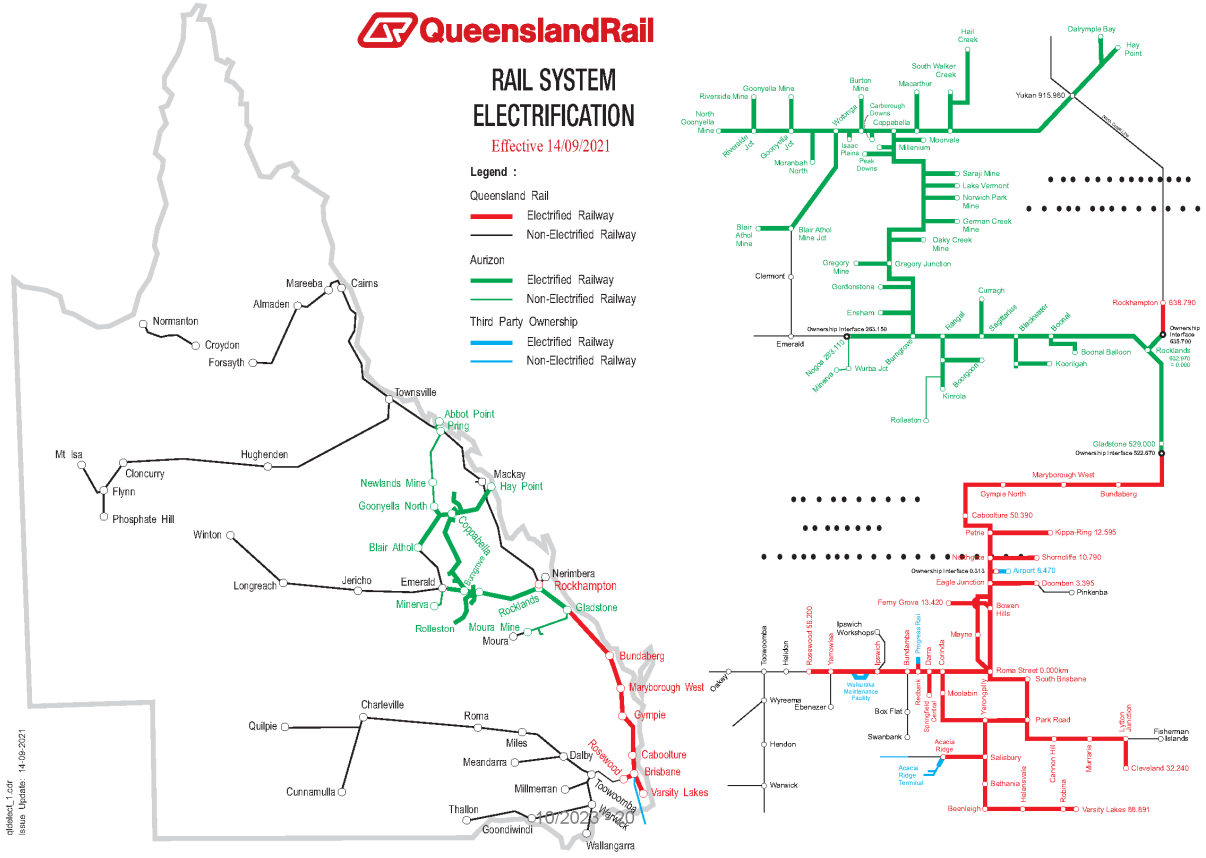
The NCL System South is serviced by an autotransformer system. The electrification system is required to be bonded and earthed to prevent the build-up of hazardous voltage in situations accessible to humans during fault conditions. To do this, the rails are bonded and used as part of the return circuit supply to the electric rollingstock, alongside steelwork connected to live conductors to an earthing system. In the autotransformer system, a feeder wire is used as part of the return circuit. The earthing and bonding of the overhead line equipment also benefits the signalling systems by removing electrical noise.

Electric energy is delivered to rollingstock via the overhead lines in the form of a contact wire, which is suspended by a catenary wire. The contact wire is held up by the catenary wire via droppers which are put at specific intervals between each span of mast or portal. While the catenary wire will vary in its height, the contact is kept in the ideal height for pantograph of the rollingstock to collect the electrical energy. In certain locations where height clearances can't be maintained, an alternative to the catenary and contact wires is used in the form of the ROCB (Rigid Overhead Conduct Bar). The ROCB is useful where clearances can't be met, such as tunnels and underpass bridges.

The overhead wiring equipment is automatically tensioned with the use of balance weight anchors to maintain a constant 11 kN tension across a wires span. This is done to ensure a constant wire tension and requires a pantograph uplift force of 80 newtons +/- 10 N for smooth sparkless current collection.


EARTH WIRE
AUTOTRANSFORMER
FEEDER WIRE
ADDITIONAL
CIRCUIT
CATENARY WIRE
CONTACT WIRE


CATENARY WIRE
RETURN
CONDUCTOR
CONTACT WIRE
STRUCTURE N°
LOCATION
STRUCTURE TO
RAIL BOND



The electrification system is monitored and controlled remotely by an Electric Control Operator (ECO) available 24 hours a day, 7 days a week. The ECO monitors and controls the electrification system to maintain a safe and reliable operation at all times. The ECO is in control of all switching operations and arranges for emergency disconnection of supply and repairs to electrical infrastructure when required. All faults affecting electric traction infrastructure need to be reported immediately to the ECO.

Operational Constraints - Infrastructure

Queensland Rail is focused on the safety of its employees, customers and the general public. As such, Queensland Rail may impose blanket speed restrictions on the network as a precautionary measure during extreme heat in the summer months. These hot weather protocols are aimed at reducing the risk of an incident from track instability.

When the rail temperature reaches 56°C (approximately an air temperature of 37°C) north of Tamaree and 55°C (approximately an air temperature of 36.6°C) south of Tamaree, a hot

weather patrol will be undertaken by Queensland Rail personnel to observe and determine the condition of the track structure. On the basis of this inspection, a blanket speed restriction may be imposed if signs of track instability have been observed. All Rail Transport Operators will be informed of the speed restriction and duration of restriction by the Brisbane Control Centre. Uniform measures for hot weather are specified in the safety standard *MD-10-143 Civil - Hot Weather Precautions for Track Stability*. A copy of this standard is available on request.

Temporary speed restrictions may also be put in place during and after the completion of maintenance activities. The extent of the restriction will depend upon the type of maintenance activity and the risk of track misalignments. All speed restrictions put in place on the network due to maintenance activities will be appropriately signed for drivers.

Force Majeure Events may also see the imposition of speed restrictions or track closures. The extent and severity of any speed restrictions are dependent on the event.

Operational Constraints - Rollingstock

All rollingstock that operates on Queensland Rail network must be authorised by Queensland Rail. All rollingstock configurations must also be authorised by Queensland Rail.

As part of the Access Application Process, the Rail Transport Operator must demonstrate that the rollingstock has been designed, constructed, modified, appropriately tested and configured in a manner that complies with the agreed Rollingstock Interface Standards in its Interface Risk Management Plan.

MD-10-194 Interface Standards provides some standard outlines that are included in APPENDIX G Rollingstock Outlines herein. Queensland Rail can advise which rolling stock outline applies to a specific route. This may be one of the standard outlines in APPENDIX G or an additional outline.

Maximum Train Length

The maximum length of trains is determined by:

- restrictions for crossing/passing other trains
- requirements for braking performance of the train
- capacity of the route
- drawgear capacity

- train handling
- requirements for road/pedestrian access across the track

Where it is necessary for a train to cross, pass or be passed by another train, the maximum train length allowable shall be such that the comparison train length (that is, the static length plus a defined allowance for stretching and train handling) is not longer than the crossing loop length.

Variations of train length for a particular train configuration are possible. However, all changes need to be agreed as part of the access agreement negotiations.

Sectional Running Times

Trains travelling south to Brisbane are travelling in the Up Direction whilst trains travelling north to Cairns are travelling in the Down Direction.

The sectional running times, expressed in minutes, for 80 km/h locomotive-hauled container trains currently operating on NCL System South are contained in APPENDIX F.

The sectional running times are “Pass to Pass” times for a running move and do not reflect acceleration and deceleration characteristics of the trains.

Proposed train configurations would need to be confirmed by the relevant operator against infrastructure constraints to determine if the sectional running times can be achieved. If the sectional running times cannot be achieved then different arrangements, including for access charges, may need to be negotiated as part of the access agreement negotiations.

Changes to the sectional running times for the System are possible over time. Any changes would need to be confirmed as part of the access agreement negotiations.

Incident Recovery Time and Management

Incident recovery time and management is dependent on the nature, severity and location of

each unique incident that may occur on this System.

To enable a quick response in case of emergency, latitudes and longitudes of some passing loops where the general direction of the railway alters are detailed below:

Location	Latitude	Longitude
Nambour	26° 37' S	152° 57' E
Cooroy	26° 25' S	152° 54' E
Gympie North	26° 09' S	152° 41' E
Theebine	25° 56' S	152° 32' E
Mungar	25° 36' S	152° 35' E
Maryborough West	25° 30' S	152° 38' E
Colton	25° 25' S	152° 39' E
Wokka	25° 16' S	152° 30' E
Bundaberg	24° 52' S	152° 20' E
Berajondo	24° 37' S	151° 50' E
Miriam Vale	24° 19' S	151° 33' E
Gladstone	23° 50' S	151° 15' E
Rocklands	23° 26' S	150° 31' E

Rail/Road Interfaces

Rail Transport Operators on the NCL System South will encounter 152 Rail/Road Interfaces (see APPENDIX C for details) categorised as follows:

Type of Interface	No. of Interfaces
Public (Active with Flashing Light / Boom Gate Protection)	62
Public (Passive Protection - Signs)	27
Occupation (Private Access)	29
QR Maintenance	34

Rollingstock Braking Rate

The signalling system and flashing light protection at rail/road interfaces has been designed to cater for the variety of trains that currently use this System.

The required stopping distances for the train are specified in *MD-10-194 Interface Standards*. Queensland Rail can advise which braking curve is applicable to the particular route.

Trackside Detection Equipment

Queensland Rail continues to focus on derailment prevention technologies along the NCL System South. These systems provide a simultaneous alarm to the train driver and Brisbane Control Centre that detects problems outside normal operating parameters. These alarms indicate a potential failure, allowing intervention by train drivers and Train Control to reduce the risk of derailments on the line.

Dragging Equipment Detector (DED)

Dragging Equipment Detectors (DEDs) detect anything that may be dragging underneath a train which may indicate that a wheel or wagon is derailed and provides appropriate alarms. DEDs are located at the following sites:

Location	KM Point
Iveragh	494.680
Benaraby	513.580

Hot Bearing Detector (HBD) / Hot Wheel Detector (HWD)

These devices detect faulty bearings on rollingstock that are projecting heat and noise signatures outside the normal operating parameters. There is only one HBD/HWD on the NCL System South located at:

Location	KM Point
Iveragh	494.680

Wheel Impact Load Detector (WILD) / Overload & Imbalanced Load Detector (OILD)

Wheel Impact Load Detectors (WILDs) identify flat wheels on rollingstock. Left undetected, these defective rollingstock wheels can cause severe damage to the network resulting in the closure of the track.

Overloaded or unevenly loaded wagons can cause excessive train and track forces that can lead to a derailment. Queensland Rail's overload and imbalanced load detectors (OILDs) are non-trade certified weigh in motion systems that measure passing wheel and axle weights and will issue alarms if the values recorded exceed set thresholds.

There is only one WILD/OILD on the NCL System South located at:

Location	KM Point
Iveragh	494.680

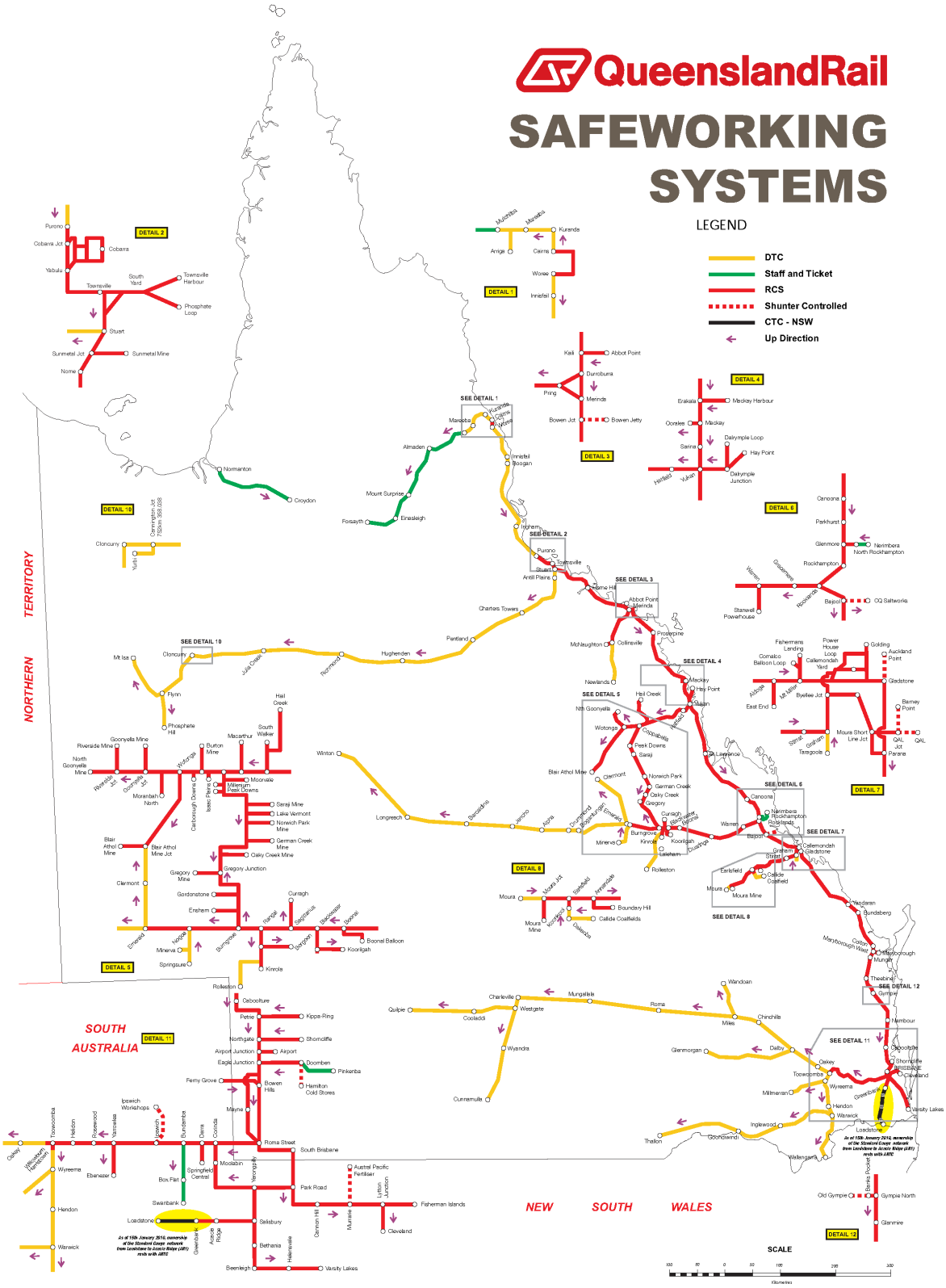
Environmental Monitoring System (EMS)

As part of Queensland Rail's infrastructure management system, remote Environmental Monitoring Systems (EMSes) are located at sites historically impacted by seasonal flooding. These EMSes provides critical real time information on flood (river level) and waterway flow, air temperature, rainfall gauge and rail temperature. Alerts are sent to both field staff and Brisbane Control Centre as a warning for increased monitoring.

Operational Systems & Train Control

The NCL System South is operated by Remote Control Signalling (RCS) in conjunction with Automatic Train Control (ATC) and Automatic Train Protection (ATP).

Train Control for the NCL System South is based in Brisbane.



Safeworking_QRNetwork
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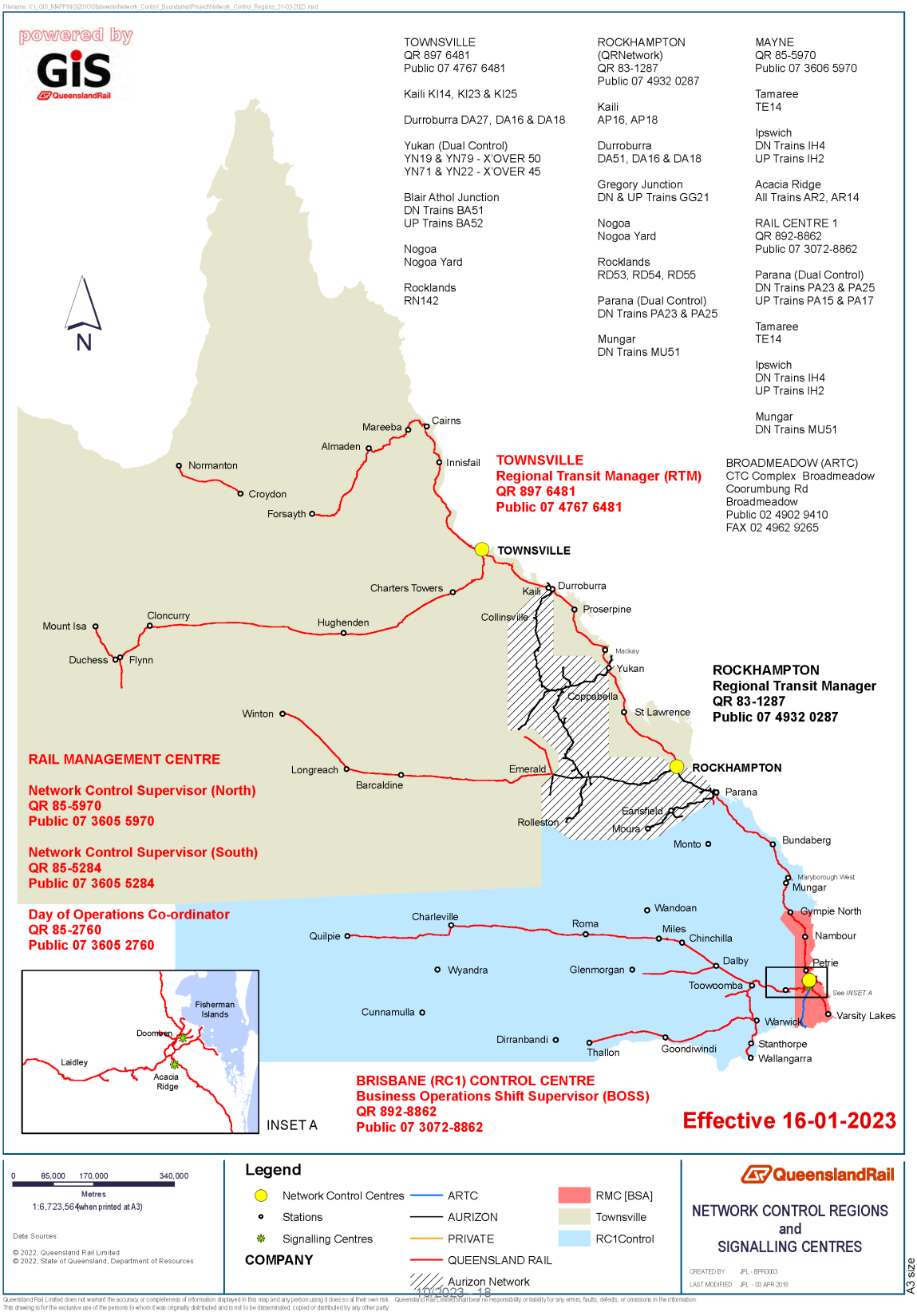
10/2023 - 19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powered by GIS QueenslandRail
TOWNSVILLE
QR 897 6481
Public 07 4767 6481
Kaili KI14, KI23 & KI25
Durroburra DA27, DA16 & DA18
Yukan (Dual Control)
YN19 & YN79 - X'OVER 50
YN71 & YN22 - X'OVER 45
Blair Athol Junction
DN Trains BA51
UP Trains BA52
Nogoa
Nogoa Yard
Rocklands
RN142
ROCKHAMPTON
(QRNetwork)
QR 83-1287
Public 07 4932 0287
Kaili
AP16, AP18
Durroburra
DA51, DA16 & DA18
Gregory Junction
DN & UP Trains GG21
Nogoa
Nogoa Yard
Rocklands
RD53, RD54, RD55
Parana (Dual Control)
DN Trains PA23 & PA25
Mungar
DN Trains MU51
MAYNE
QR 85-5970
Public 07 3606 5970
Tamaree
TE14
Ipswich
DN Trains IH4
UP Trains IH2
Acacia Ridge
All Trains AR2, AR14
RAIL CENTRE 1
QR 892-8862
Public 07 3072-8862
Parana (Dual Control)
DN Trains PA23 & PA25
UP Trains PA15 & PA17
Tamaree
TE14
Ipswich
DN Trains IH4
UP Trains IH2
Mungar
DN Trains MU51
N
Mareeba
Cairns
Almaden
Innisfail
Normanton
Croydon
Forsayth
TOWNSVILLE
Regional Transit Manager (RTM)
QR 897 6481
Public 07 4767 6481
BROADMEADOW (ARTC)
CTC Complex Broadmeadow
Coorumbung Rd
Broadmeadow
Public 02 4902 9410
FAX 02 4962 9265
TOWNSVILLE
Charters Towers
Kaili
Durroburra
Proserpine
Collinsville
Cloncurry
Mount Isa
Hughenden
Duchess
Flynn
Mackay
Yukan
Coppabella
St Lawrence
ROCKHAMPTON
Regional Transit Manager
QR 83-1287
Public 07 4932 0287
Winton
RAIL MANAGEMENT CENTRE
Network Control Supervisor (North)
QR 85-5970
Public 07 3605 5970
Network Control Supervisor (South)
QR 85-5284
Public 07 3605 5284
Longreach
Barcaldine
Emerald
ROCKHAMPTON
Parana
Rolleston
Earlsfield
Moura
Monto
Bundaberg
Maryborough West
Mungar
Day of Operations Co-ordinator
QR 85-2760
Public 07 3605 2760
Wandoan
Gympie North
Charleville
Roma
Miles
Chinchilla
Nambour
Quilpie
Dalby
Petrie
Wyandra
Glenmorgan
Toowoomba
See INSET A
Cunnamulla
Warwick
Varsity Lakes
Dirranbandi
Thallon
Goondiwindi
Stanthorpe
Wallangarra
Fisherman Islands
Doomben
Laidley
Acacia Ridge
INSET A
BRISBANE (RC1) CONTROL CENTRE
Business Operations Shift Supervisor (BOSS)
QR 892-8862
Public 07 3072-8862
Effective 16-01-2023
0 85,000 170,000 340,000
Metres
1:6,723,564 (when printed at A3)
Data Sources:
© 2022, Queensland Rail Limited
© 2022, State of Queensland, Department of Resources
Legend
Network Control Centres
Stations
Signalling Centres
COMPANY
ARTC
AURIZON
PRIVATE
QUEENSLAND RAIL
Aurizon Network
RMC [BSA]
Townsville
RC1Control
QueenslandRail
NETWORK CONTROL REGIONS
and
SIGNALLING CENTRES
CREATED BY JPL - BPR0003
LAST MODIFIED JPL - 03 APR 2018
A3 size
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Information Systems

ViziRail is the key software system designed as a tool for use in integrated scheduling, possession planning, monitoring and reporting on the Queensland Rail network.

Functionality includes the following modules:

- Train Notices
- Train Monitoring
- Network Incident recording
- Train Consists
- Speed Restrictions
- Planning Graphs
- Train Scheduling
- Possessions

Telecommunications

Communications between Driver and Controller is via the QLD Rail UHF analogue radio system (Train Control Radio - TCR) or the Enhanced Radio System (ERS) (a Digital Mobile Radio (DMR) technology), which utilise a number of Queensland Rail channels and frequencies. Transceivers should utilise the “auto” setting, so that the channel or Talk Group is selected to suit the geographical location. Frequency specification and coverage details are available as part of the Access Application Process.

Access to the Maintenance Supervisory Radio System (MSR) can be gained by using Queensland Rail telephone extensions depending on location or via the UHF MSR system or ERS utilising Queensland Rail channels and frequencies.

In addition, all locomotives and other power vehicles (including Multiple Units and Miscellaneous Vehicles such as Rail Motors) must carry a second UHF radio operating on Queensland Rail Channel 150 (TX 411.375 MHz and RX 411.375 MHz). This provides on-board and wayside communications including end to end, train to train and train to track maintenance teams over an average distance of 8-10 km.

All train control and maintenance supervisory radio channels utilise mobile to base subaudio tones. No subaudible is used on Wayside channel 150.

Communications on board locomotives must conform to Queensland Rail's safety standard *MD-10-86 Telecommunications – Mobile Voice Radio Communications Systems*.

Rail Operations and the Environment

Queensland Rail is committed to operating in a sustainable and environmentally responsible manner in support of a resilient rail network that delivers value and benefit for our customers, our people, the community and the environment. Click here to access our Environment and Sustainability Policy.

Additional Information relating to environmental management at Queensland Rail can be viewed at Environment (queenslandrail.com.au).

All Rail Transport Operators operating on the Queensland Rail network are required to comply with all current state and federal legislation relating to the management and protection of the environment. Specific environmental management requirements (including noise management) are included and agreed to in all Access Agreements.

Rail Transport Operators must determine if any environmental approvals/authorities are required for the activities/operations proposed. If permits or approvals are required, they must be obtained from the relevant regulator prior to the commencement of the activities/operations. Copies of all environmental authorities administered by the Department of Environment, Science and Innovation (DESI) within Queensland are available upon request from DESI and can be found at environment.des.qld.gov.au.

Air Quality and Contamination Impacts

Lift off or loss of material from uncovered or unsealed wagons, or fugitive product deposits from loading can have a negative impact on local air quality values and result in contamination of the surrounding environment. This contamination can impact environmental values and cause damage to rail infrastructure.

In accordance with legislative obligations, Rail Transport Operators must take all reasonable and practicable measures to prevent the loss of product during transport on Queensland Rail's network.

Environmental Noise Management

While noise from the operation of a railway is exempt from environmental nuisance provisions under the Queensland Environment Protection Act 1994, Queensland Rail strives to manage noise associated with its operations and the operations of other network users wherever reasonable and practical.

As the rail manager, Queensland Rail works closely with customers regarding environmental issues, and provides feedback to Rail Transport Operators to allow them to investigate and address as applicable, noise related issues that may be associated with their assets or operations.

There are various sources of noise from a railway and to aid efficient and effective noise reduction, a range of noise management measures are utilised by Queensland Rail. These are detailed at queenslandrail.com.au/inthecommunity/environment/noisemanagement.

Rail noise and vibration requirements and criteria outlined in the Department of Transport and Main Roads (DTMR) Interim Guideline – Operational Railway Noise and Vibration (IGORNV) are applicable where a change to infrastructure or operations is likely to result in a significant change to noise impacts to nearby noise sensitive place(s). Queensland Rail will work with third-party operators to understand and support the management of these impacts.

IGORNV can be accessed via the following link:

tmr.qld.gov.au/business-industry/Technical-standards-publications/Transport-noise-management-code-of-practice.aspx

Opportunities to manage/minimise rail noise must be considered as part of access planning, captured in Environmental Investigation and Risk Management Report (EIRMR) and control measures must be discussed and agreed as part of the Interface Risk Management Plan (IRMP) development.

Where practicable, priority should be given to the management of rail noise at its source. This approach will deliver a benefit to more of Queensland Rail's neighbours than can be achieved through the delivery of fixed, last line treatments such as noise barriers. Physical noise barriers should only be considered, where suitable source-based treatments are not available.

Wheel Squeal & Flanging

Wheel squeal is caused by friction forces between the top of rail and wheel interface, whereas flanging noise is predominantly caused by friction forces between the side of rail and wheel interface. Continuous or sustained wheel squeal produced primarily on the low rail side is

distinct from discontinuous “flanging noise” that is produced on the high rail side. Continuous wheel squeal is of a high level, and Queensland Rail’s experience is that it may cause significant community reaction, while flanging noise is of a lower level and is more accepted by the community.

Generally, tighter radius curves (i.e. under 300 metre radius), when associated with a number of rollingstock factors that promote wheel squeal, may result in squeal being produced. Rollingstock factors that may promote wheel squeal include:

- Higher wheel hardness
- Stiff primary suspensions
- High centre plate friction
- Worn wheel treads
- Misaligned axles
- Unmatched wheel tread diameters, and
- Incorrectly adjusted side bearers

Noise Complaints

Queensland Rail is committed to act towards its neighbours in a considerate and reasonable manner. This good neighbour commitment assumes a reasonable degree of tolerance from neighbours and a commitment by Queensland Rail to take action where appropriate.

Where Queensland Rail receives complaints about noise from railway activities for which Queensland Rail may be responsible, Queensland Rail responds to those complaints and maintains records of those complaints in accordance with its Safety and Environmental Management System (SEMS).

Where available, generic data will be supplied on request to a third-party operator who is proposing operations within a defined network. That data will indicate those areas where Queensland Rail has received prior complaints relating to its train operations. It will be made available when a third-party operator is undertaking the development of EIRMR as part of its Access Agreement conditions.

Third Party Requirements

Any Rail Transport Operator applying for access to Queensland Rail’s network shall be required to commission an environmental investigation of the proposed operations. This investigation will be conducted by a suitably qualified person, reasonably acceptable to both parties.

In response to the findings of such an investigation, the operator shall produce an EIRMR that identifies the risks of environmental harm associated with the operation and provides proposed controls to address the risks. This shall be reviewed by, and agreed with, Queensland Rail.

In addition, the operator shall have in place documented standards and procedures that, amongst other things, have regard for the issues, risk and control measures identified in the EIRMR. Further guidance on environmental risk investigation and management can be found in Queensland Rail's Access Undertaking.

Any SEMS documentation (wholly or partially) identified as specifically relating to the control of corridor infrastructure (below rail) environmental issues, will be made available to the operator to assist in formulating appropriate and consistent operational (above rail) controls within their EIRMR or documented standards/procedures.

Future Infrastructure Improvements

Capacity Enhancements

Queensland Rail welcomes opportunities to work with customers with a view to transporting additional tonnages on this System.

We encourage Rail Transport Operators, mining companies and/or processors to engage with Queensland Rail at the earliest possible opportunity. This will allow sufficient time to work through detailed capacity analysis and to determine the network upgrades necessary and negotiate appropriate commercial arrangements.

Capacity enhancements will continue to be delivered for future projects provided that contracted tonnages:

- are sufficient to justify the necessary capital investment on commercial terms; and
- adequate notice is given from the time of contracting capacity to deliver the required enhancements.

Infrastructure Management and Access

APPENDIX B - SCHEMATIC LAYOUT is colour coded to indicate Management of Infrastructure and Access.

Third party access to non-Queensland Rail managed infrastructure is by commercial

arrangement with the relevant party.

The initial point of contact for Queensland Rail managed below rail assets is:

General Manager Commercial and Rail Access
305 Edward Street
Brisbane Qld 4001
Email: aarf.freight@qr.com.au

APPENDIX A Definitions

Access Agreement

Access Agreement means an agreement between Queensland Rail and an Access Holder for the provision of Access.

Access Undertaking

A document approved by the Queensland Competition Authority (QCA) in accordance with the QCA Act 1997 (Q) that sets out principles for negotiating access to Queensland Rail's declared services.

Accreditation

Accreditation in accordance with Part 3 Division 4 of the Rail Safety National Law (RSNL) and "Accredited" has a similar meaning.

Automatic Train Protection (ATP)

Automatic Train Protection is a computer-controlled system designed to make sure the train:

- does not exceed the current speed limit;
- does not exceed the limit of authority generated by the interlocking (and usually indicated by a signal at STOP);
- does not make unreasonable train movements during shunting, when stationary, or at startup

Automatic Warning System (AWS)

Automatic Warning System is designed to

- provide an in-cab visible and audible indication of the aspect displayed in the next signal

- prompt and warn the train driver of a RESTRICTED signal aspect displayed in the next signal
- stop the train if the driver fails to acknowledge the AWS alarm of a RESTRICTED signal aspect

Axle Counter

At some locations in Remote Controlled Signalling (RCS) Territory an axle counter system has been provided to detect occupancy of a section of track.

An axle counter at each end of a section determines whether an axle is entering or leaving the section and counts the number of axles passing the counter in each direction. By keeping an accurate count of axles into the section, then the number of axles out of the section, the system can determine if the section is occupied or not.

Block Train

A train consisting entirely of similar classes of wagons of axle loads over 12.2 tonnes marshalled together for a certain class of traffic. The definition is also extended to cover trains in which 12 or more such wagons loaded to more than 12.2 tonnes gross per axle are included within a length of 315 metres or less of the train.

Comparison Train Length

The total length in metres of a train including the locomotives. For the purpose of comparison with the length of crossing loops, it is defined as the static train length + 2% of the static train length for train handling allowance + 125mm per vehicle for coupler and drawgear tolerances.

Continuous Welded Rail (CWR)

Rail that has mechanical rail joints spaced at greater than 220 m intervals or has no mechanical rail joints at all.

Crossing Loop Length

The maximum length in metres of the train which can be accommodated in the loop to allow normal operation of the signalling systems for crossing or passing movements.

Daily Train Plan (DTP)

Collectively, the scheduled times for all Train Services operating on Queensland Rail's Rail Infrastructure and any Planned Possession on a particular day.

Declared Infrastructure

Infrastructure declared as available for access by third-party operators in accordance with the QCA Act 1997 (Q).

Declared Services

Services declared as available for access by third-party operators in accordance with the QCA Act 1997 (Q).

Design Neutral Temperature

The rail temperature at which the track is designed to be stress free as defined in Queensland Rail's Civil Engineering Publication CEP.26 "Rail Stressing Manual".

Direct Traffic Control (DTC)

Direct Traffic Control (DTC) is an absolute block safeworking system used to control the movement of trains in non-signalled territory.

Central to DTC is an on-board DTC computer which displays authorities stored in its database. The relevant authority is activated by the train crew following an exchange of codes between the crew and the controller. Codes are exchanged verbally using the train control radio.

The procedures governing the operation of DTC are detailed in Queensland Rail's standard *MD-10-113 Direct Traffic Control Manual*.

Dragging Equipment Detector (DED)

A mechanism positioned on sections of track to detect any dragging equipment on train.

Dragging Equipment Detector Alarm (DED Alarm)

Part of the Queensland Rail System which advises the Train Controller by a computer prompt message that a D.E.D. has been activated and the train driver by a recorded voice message.

Electric Train Staff

A 'token' system of train working between interlockings on single lines in non-track-circuited areas, where release of a token is controlled by electrically connected and interlocked instruments.

Electromagnetic Compatibility (EMC)

The ability of an equipment or system to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbances to anything in that environment.

Environmental Monitoring System (EMS)

Remote environmental monitoring systems providing critical information regarding temperature, rainfall and stream levels.

EPP (Noise)

Environmental Protection (Noise) Policy 2019, Subordinate Legislation to the Queensland Environmental Protection Act 1994.

Force Majeure Event

Means any cause, event or circumstance, or combination of causes, events or circumstances, which is beyond the reasonable control of the Party affected thereby and which by the exercise of due diligence such Party is not reasonably able to prevent or overcome, including but not limited to, results of abnormal weather conditions, act of God, breakdown of any facilities or machinery or unavailability of essential equipment, strikes or other industrial dispute.

Hot Wheel & Bearing Detector (HWD/HBD)

Heat sensors located at strategic locations on the system that identify abnormal temperatures in wheels and wheel bearings as the train passes over, transmits a signal to the train control panel that necessitates an inspection of the suspect wagon and remedial action.

Line Code or Line Section Code (LSC)

Line Code is a unique alpha-numeric identifier applied to a section of track on Queensland Rail's network and usually runs from junction point to junction point. Each numeric identifier is unique and can be further rolled up into Corridors using the alpha identifier.

Long Welded Rail (LWR)

Rail that has mechanical rail joints spaced at intervals between 110m and 220m.

Master Train Plan (MTP)

Collectively, the scheduled times as advised by Queensland Rail from time to time for all Train Services operating on Queensland Rail's Rail Infrastructure where such scheduled times remain unchanged from week to week, and any Planned Possessions.

Nominal Rail Size

Rail sizes 20, 31 and 41 kg/m are all nominal rail sizes used to group together a range of rail types and sizes originally designated in the imperial unit "lb/yd". The term "nominal" is used in recognition of the variation in the dimensions, mass and engineering properties of the rails in this category.

Ordinary Staff and Ticket Working

A token-based system of safeworking where the movement of trains on bi-directional single lines is on possession of a staff token or ticket. Each section of single line has a unique token.

Rail Transport Operator

A person who has, or is seeking, Access from Queensland Rail to operate Train Services on the Rail Infrastructure and who is, or who will become Accredited in respect of those Train Services.

Remote Controlled Signalling (RCS)

A system of safeworking where train movements are governed by aspects displayed in colour light signals which are controlled from a remote location and by the passage of trains. Some colour light signals and points may be released by the Train Controller to be operated from a local area by using:

- a local control panel;
- an electrically released shunting frame;
- a zone released shunting system, or
- emergency push buttons.

Rail Transport Operators' trains are expected to meet existing signalling standards to ensure track circuits and other signalling equipment operate safely and effectively. In particular, Queensland Rail's standard *MD-10-76 Signalling Principles* must be complied with.

Remote Train Overview Application (RTOA)

A PC based system providing real time operational information, gathering information on train running and rail network status for immediate and continuously updated display and historical analysis.

Being a multi-tier client-server application, different levels of access/security ensure confidentiality of an Operator's train performance statistics.

Rollingstock Authorisation Process

The process for determining and validating rollingstock compliance to the agreed interface standards and authorising these to be used as part of a train on the network.

Short Welded Rail (SWR)

Rail that has mechanical rail joints spaced at intervals less than 110m.

Staff and Ticket

The Staff and Ticket System allows for the movement of trains over a bidirectional track.

The Staff and Ticket System operates (in accordance with Queensland Rail's standard *MD-10-114 Staff and Ticket Manual*) on the principle of absolute block working, which provides that only one train will be authorised to be on any one section at any one time.

Standard Train

The predominant type of train operating on the line/system.

Train Authorisation

The process for acceptance of a train made up of authorised rollingstock to be operated on specified routes with stated conditions or restrictions.

Unit Train

A train composed entirely of one class and one drawgear classification of rollingstock.

Universal Traffic Control (UTC)

A PC based train control supervisory system that provides the means to remotely control train movements over a large area and provide management and train users with real time train related information.

ViziRail

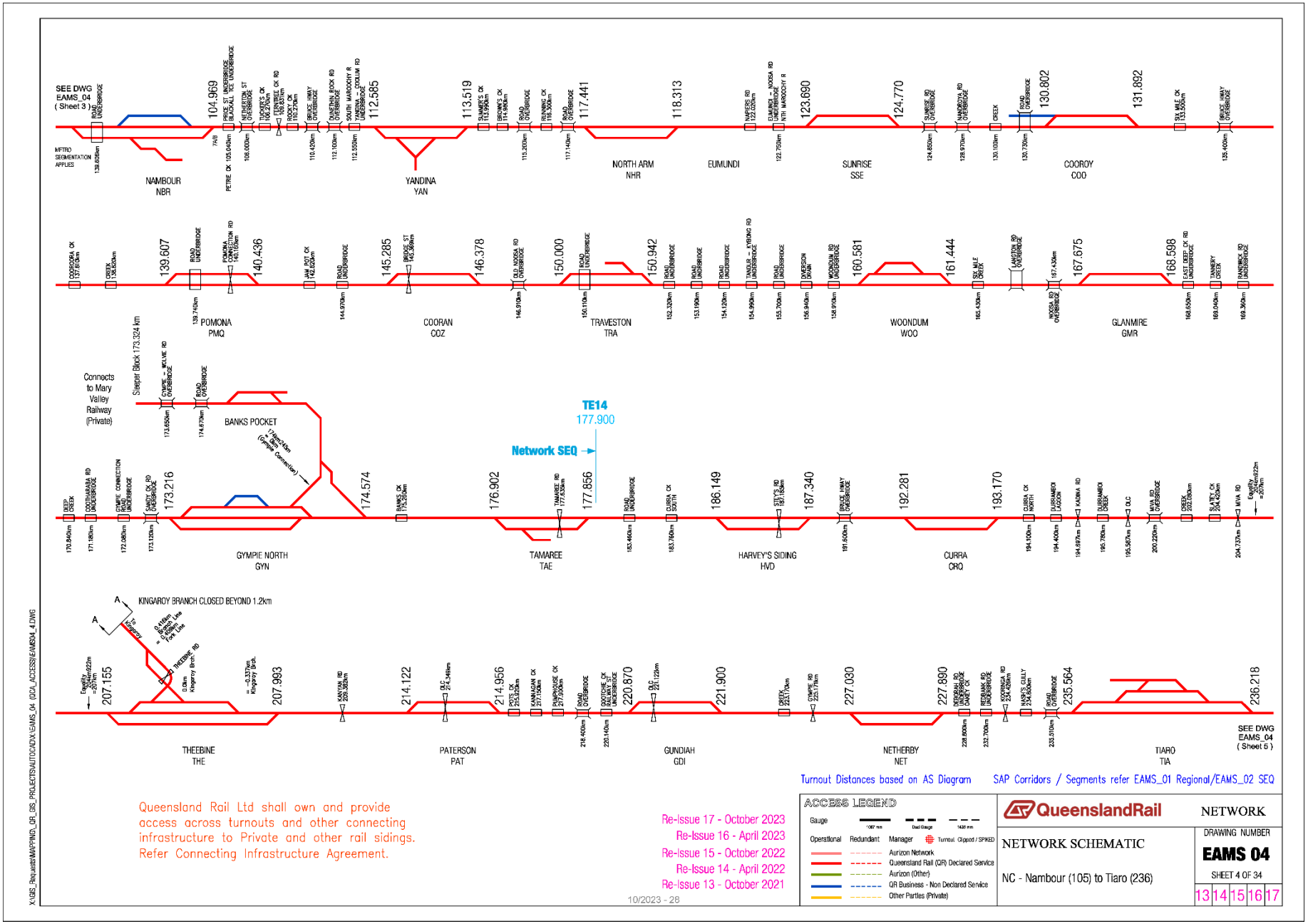
A fully integrated scheduling, possession planning, monitoring and reporting tool for managing the Queensland Rail below-rail network.

ViziRail also supports the provision of all QCA and the Department of Transport and Main Roads reporting requirements.

Wheel Impact Load Detector (WILD)

In track monitoring system to identify wheel flats.

APPENDIX B Schematic Layout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NAMBOUR NBR
YANDINA YAN
NORTH ARM NHR
EUMUNDI
SUNRISE SSE
COOROY COO
POMONA PMQ
COORAN COZ
TRAVESTON TRA
WOONDUM WOO
GLANMIRE GMR
Connects to Mary Valley Railway (Private)
Sleeper Block 173.324 km
BANKS POCKET
TE14
177.900
Network SEQ
GYMPIE NORTH GYN
TAMAREE TAE
HARVEY'S SIDING HVD
CURRA CRQ
KINGAROY BRANCH CLOSED BEYOND 1.2km
THEEBINE THE
PATERSON PAT
GUNDIAH GDI
NETHERBY NET
TIARO TIA
SEE DWG EAMS_04 (Sheet 5)
Turnout Distances based on AS Diagram
SAP Corridors / Segments refer EAMS_01 Regional/EAMS_02 SEQ
Queensland Rail Ltd shall own and provide access across turnouts and other connecting infrastructure to Private and other rail sidings. Refer Connecting Infrastructure Agreement.
Re-Issue 17 - October 2023
Re-Issue 16 - April 2023
Re-Issue 15 - October 2022
Re-Issue 14 - April 2022
Re-Issue 13 - October 2021
10/2023 - 28
ACCESS LEGEND
Gauge
Operational
Redundant
Manager
Turnout Clipped / SPKED
Aurizon Network
Queensland Rail (QR) Declared Service
Aurizon (Other)
QR Business - Non Declared Service
Other Parties (Private)
QueenslandRail
NETWORK
NETWORK SCHEMATIC
NC - Nambour (105) to Tiaro (236)
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SHEET 4 OF 34
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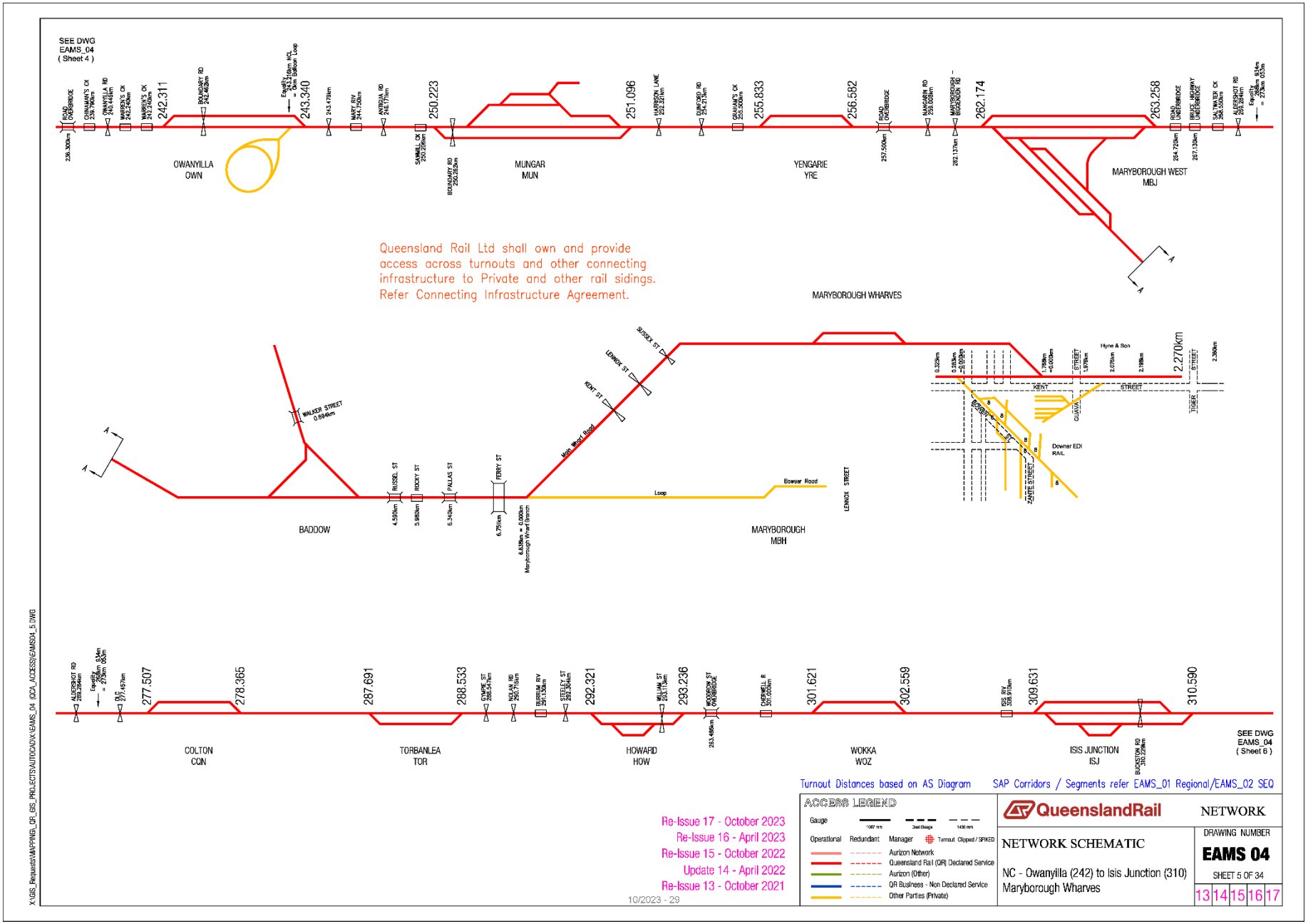
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251.096
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256.582
262.174
263.258
OWANYILLA OWN
MUNGAR MUN
YENGARIE YRE
MARYBOROUGH WEST MBJ
Queensland Rail Ltd shall own and provide access across turnouts and other connecting infrastructure to Private and other rail sidings. Refer Connecting Infrastructure Agreement.
MARYBOROUGH WHARVES
WALKER STREET 0.594km
BADDOW
MARYBOROUGH MBH
Bowser Road
Loop
Main Wharf Road
SUSSEX ST
LENNOX ST
KENT ST
RUSSEL ST
ROCKY ST
PALLAS ST
FERRY ST
LENNOX STREET
Hyne & Son
Downer EDI RAIL
277.507
278.365
287.691
288.533
292.321
293.236
301.621
302.559
309.631
310.590
COLTON CON
TORBANLEA TOR
HOWARD HOW
WOKKA WOZ
ISIS JUNCTION ISJ
SEE DWG EAMS_04 (Sheet 6)
Turnout Distances based on AS Diagram
SAP Corridors / Segments refer EAMS_01 Regional/EAMS_02 SEQ
ACCESS LEGEND
Gauge
Operational
Redundant
Manager
Turnout Clipped / SPIKED
Aurizon Network
Queensland Rail (QR) Declared Service
Aurizon (Other)
QR Business - Non Declared Service
Other Parties (Private)
Re-Issue 17 - October 2023
Re-Issue 16 - April 2023
Re-Issue 15 - October 2022
Update 14 - April 2022
Re-Issue 13 - October 2021
10/2023 - 29
QueenslandRail NETWORK
NETWORK SCHEMATIC
NC - Owanyilla (242) to Isis Junction (310)
Maryborough Wharves
DRAWING NUMBER
EAMS 04
SHEET 5 OF 34
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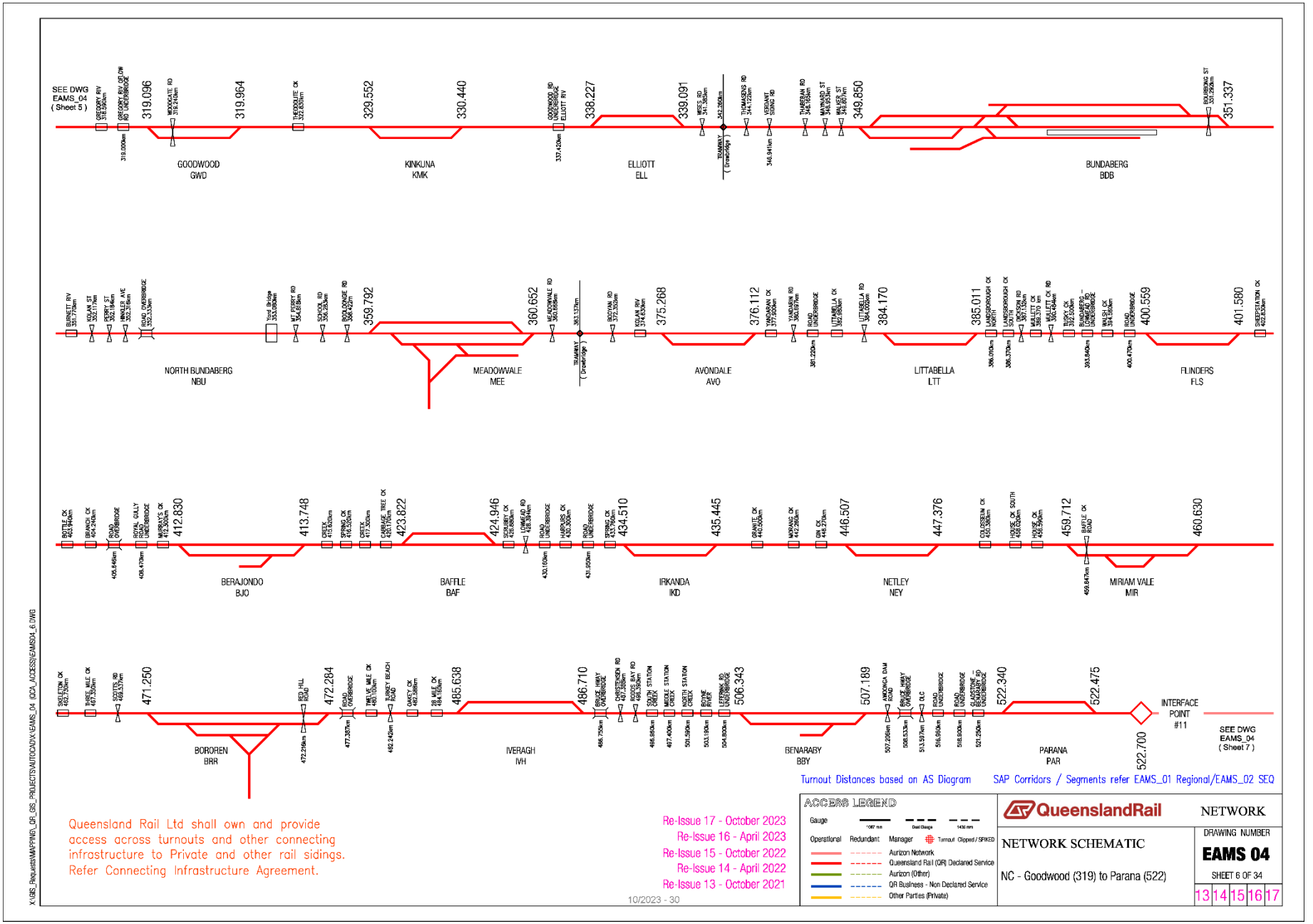
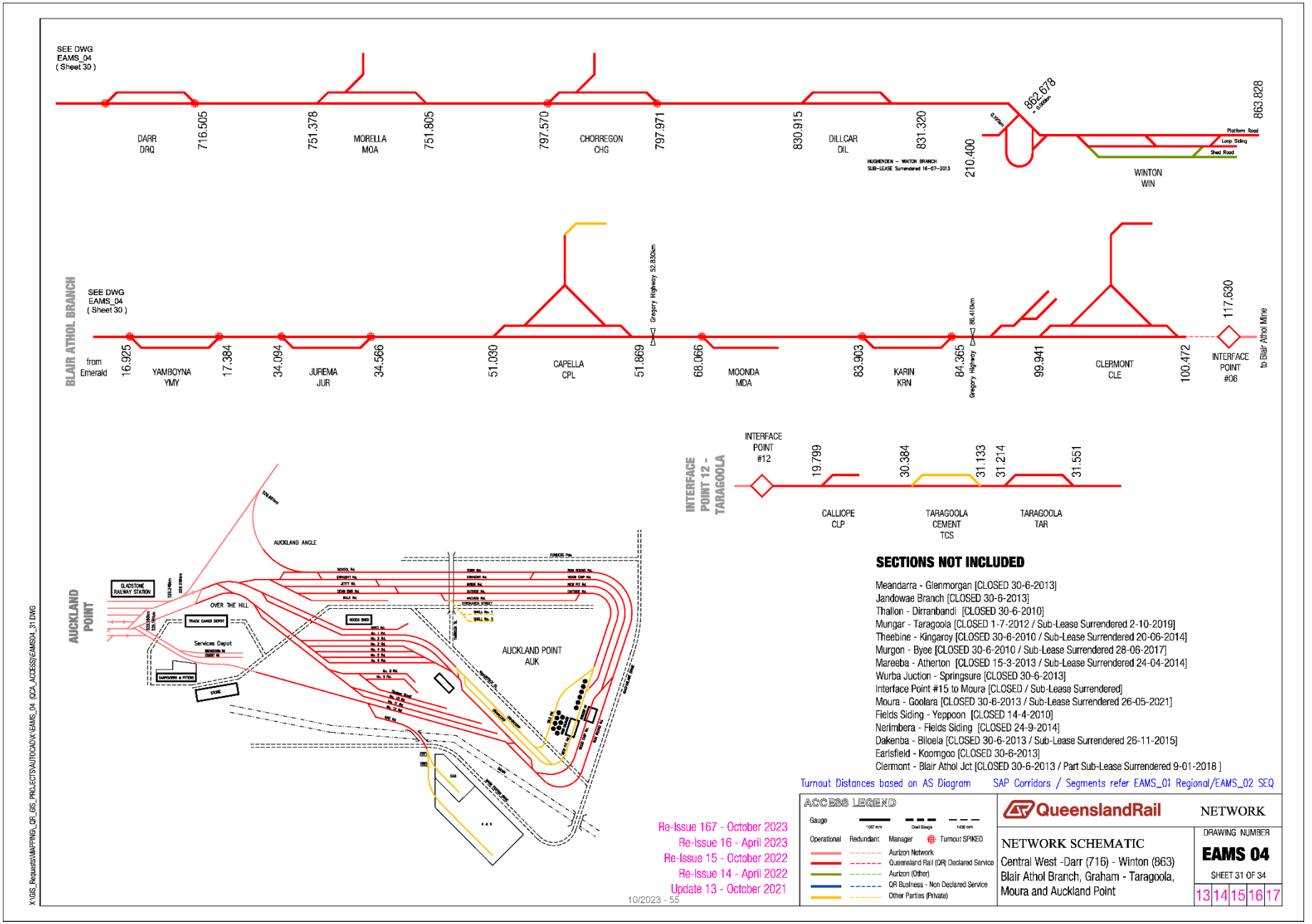

GOODWOOD GWD
KINKUNA KMK
ELLIOTT ELL
BUNDABERG BDB
NORTH BUNDABERG NBU
MEADOWVALE MEE
AVONDALE AVO
LITTABELLA LTT
FLINDERS FLS
BERAJONDO BJO
BAFFLE BAF
IRKANDA IKD
NETLEY NEY
MIRIAM VALE MIR
BORDOREN BRR
IVERAGH IVH
BENARABY BBY
PARANA PAR
INTERFACE POINT #11
Turnout Distances based on AS Diagram
SAP Corridors / Segments refer EAMS_01 Regional/EAMS_02 SEQ
Queensland Rail Ltd shall own and provide access across turnouts and other connecting infrastructure to Private and other rail sidings. Refer Connecting Infrastructure Agreement.
Re-Issue 17 - October 2023
Re-Issue 16 - April 2023
Re-Issue 15 - October 2022
Re-Issue 14 - April 2022
Re-Issue 13 - October 2021
10/2023 - 30
ACCESS LEGEND
Operational
Redundant
Manager
Aurizon Network
Queensland Rail (QR) Declared Service
Aurizon (Other)
QR Business - Non Declared Service
Other Parties (Private)
QueenslandRail NETWORK
NETWORK SCHEMATIC
NC - Goodwood (319) to Parana (522)
DRAWING NUMBER
EAMS 04
SHEET 6 OF 34
13 14 15 16 17


SEE DWG EAMS_04 (Sheet 30)
DARR DRQ
716.505
751.378
MORELLA MOA
751.805
797.570
CHORREGON CHG
797.971
830.915
DILLCAR DIL
831.320
HUGHENDEN – WINTON BRANCH SUB-LEASE Surrendered 16-07-2013
210.400
862.678
863.828
Platform Road
Loop Siding
Shed Road
WINTON WIN
BLAIR ATHOL BRANCH
SEE DWG EAMS_04 (Sheet 30)
from Emerald
16.925
YAMBOYNA YMY
17.384
34.094
JUREMA JUR
34.566
51.030
CAPELLA CPL
Gregory Highway 52.830km
51.869
68.066
MOONDA MDA
83.903
KARIN KRN
84.365
Gregory Highway 86.410km
99.941
CLERMONT CLE
100.472
117.630
INTERFACE POINT #06
to Blair Athol Mine
INTERFACE POINT 12 - TARAGOOLA
INTERFACE POINT #12
19.799
CALLIOPE CLP
30.384
TARAGOOLA CEMENT TCS
31.133
31.214
TARAGOOLA TAR
31.551
AUCKLAND POINT
GLADSTONE RAILWAY STATION
AUCKLAND ANGLE
OVER THE HILL
TRACK GANGS DEPOT
Services Depot
DEPOTMEN & FITTERS
STORE
AUCKLAND POINT AUK
SECTIONS NOT INCLUDED
Meandarra - Glenmorgan [CLOSED 30-6-2013]
Jandowae Branch [CLOSED 30-6-2013]
Thallon - Dirranbandi [CLOSED 30-6-2010]
Mungar - Taragoola [CLOSED 1-7-2012 / Sub-Lease Surrendered 2-10-2019]
Theebine - Kingaroy [CLOSED 30-6-2010 / Sub-Lease Surrendered 20-06-2014]
Murgon - Byee [CLOSED 30-6-2010 / Sub-Lease Surrendered 28-06-2017]
Mareeba - Atherton [CLOSED 15-3-2013 / Sub-Lease Surrendered 24-04-2014]
Wurba Junction - Springsure [CLOSED 30-6-2013]
Interface Point #15 to Moura [CLOSED / Sub-Lease Surrendered]
Moura - Goolara [CLOSED 30-6-2013 / Sub-Lease Surrendered 26-05-2021]
Fields Siding - Yeppoon [CLOSED 14-4-2010]
Nerimbera - Fields Siding [CLOSED 24-9-2014]
Dakenba - Biloela [CLOSED 30-6-2013 / Sub-Lease Surrendered 26-11-2015]
Earlsfield - Koomgoo [CLOSED 30-6-2013]
Clermont - Blair Athol Jct [CLOSED 30-6-2013 / Part Sub-Lease Surrendered 9-01-2018]
Turnout Distances based on AS Diagram
SAP Corridors / Segments refer EAMS_01 Regional/EAMS_02 SEQ
ACCESS LEGEND
Gauge
Operational
Redundant
Manager
Turnout SPIKED
Aurizon Network
Queensland Rail (QR) Declared Service
Aurizon (Other)
QR Business - Non Declared Service
Other Parties (Private)
Re-Issue 167 - October 2023
Re-Issue 16 - April 2023
Re-Issue 15 - October 2022
Re-Issue 14 - April 2022
Update 13 - October 2021
10/2023 - 55
QueenslandRail
NETWORK
NETWORK SCHEMATIC
Central West -Darr (716) - Winton (863)
Blair Athol Branch, Graham - Taragoola,
Moura and Auckland Point
DRAWING NUMBER
EAMS 04
SHEET 31 OF 34
13 14 15 16 17
X:\GIS_Requests\MAPPING_QR_GIS_PROJECTS\AUTOCAD\X:\EAMS_04 (QCA_ACCESS)\EAMS04_31.DWG

APPENDIX C Rail/Road Interface Details

ASSET CODE	CORRIDOR	CROSSING NAME	CROSSING TYPE	CROSSING PROTECTION
LXR_00733	Nambour to Theebine	BRIDGE STREET (KING STREET)	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00818	Nambour to Theebine	STEY'S ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00842	Nambour to Theebine	LINDLEYS LANE	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00861	Nambour to Theebine	FERNTREE CREEK ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00975	Nambour to Theebine	RESERVE ST-POMONA CONNECTIONRD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_01015	Nambour to Theebine	TAMAREE ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_01021	Nambour to Theebine	COOLOOLA STREET / SCRUB ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_03346	Nambour to Theebine	WATER TREATMENT FACILITY ACCRD	3. PRIVATE	R1. ACTIVE - LIGHTS
LXR_03347	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_03348	Nambour to Theebine	PRIVATE ACCESS ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_03349	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_03350	Nambour to Theebine	QR MAINTENANCE ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_03365	Nambour to Theebine	HERMANS ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_04082	Nambour to Theebine	BRISBANE ROAD	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_05547	Nambour to Theebine	DESIGNATED QRAIL MNTENANCE RD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05549	Nambour to Theebine	MAPLE STREET	1. PUBLIC	P3. PASSIVE
LXR_05551	Nambour to Theebine	POMONA STATION PEDESTRIAN ACC	1. PUBLIC	P1. ACTIVE - LIGHTS
LXR_05552	Nambour to Theebine	TRAVESTON STN ILLEGAL PED ACC	1. PUBLIC	P4. UNPROTECTED
LXR_05918	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05919	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05920	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP

ASSET CODE	CORRIDOR	CROSSING NAME	CROSSING TYPE	CROSSING PROTECTION
LXR_05921	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05922	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05923	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	P3. PASSIVE
LXR_05924	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05926	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05927	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05928	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05929	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	P3. PASSIVE
LXR_05930	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05931	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	P3. PASSIVE
LXR_05932	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	P3. PASSIVE
LXR_05933	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05934	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05935	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05936	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	P3. PASSIVE
LXR_05937	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05938	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05939	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05940	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05941	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05942	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05943	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05944	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05945	Nambour to Theebine	QR MAINTENANCE ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_06063	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	P3. PASSIVE
LXR_06127	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP

ASSET CODE	CORRIDOR	CROSSING NAME	CROSSING TYPE	CROSSING PROTECTION
LXR_06689	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	P3. PASSIVE
LXR_07193	Nambour to Theebine	QR MAINTENANCE ROAD	5. QR MAINTENANCE	R3. PASSIVE - STOP
LXR_05086	Theebine to Bundaberg	KANYAN ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05087	Theebine to Bundaberg	PATERSON ROAD EAST	3. PRIVATE	R3. PASSIVE - STOP
LXR_05090	Theebine to Bundaberg	NETHERBY ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05091	Theebine to Bundaberg	KOORINGA ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05092	Theebine to Bundaberg	SHEPPARDS ROAD	1. PUBLIC	R3. PASSIVE - STOP
LXR_05093	Theebine to Bundaberg	PIGEON ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_05094	Theebine to Bundaberg	OWANYILLA ROAD	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_05095	Theebine to Bundaberg	OWANYILLA BOUNDARY ROAD	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_05097	Theebine to Bundaberg	UNNAMED RD PROPERTY ACCESS RD	1. PUBLIC	R3. PASSIVE - STOP
LXR_05098	Theebine to Bundaberg	ANTIGUA ROAD	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_05099	Theebine to Bundaberg	BOUNDARY ROAD	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_05102	Theebine to Bundaberg	DUNFORD ROAD	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_05103	Theebine to Bundaberg	NANGARIN ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05104	Theebine to Bundaberg	BIGGENDEN RD GAYNDAH RD XING	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05105	Theebine to Bundaberg	ALDERSHOT ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05106	Theebine to Bundaberg	COLTON ACCESS ROAD	1. PUBLIC	R3. PASSIVE - STOP
LXR_05107	Theebine to Bundaberg	TORBANLEA / PIALBA ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05108	Theebine to Bundaberg	BURRUM RIVER RD / NOLANS RD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05109	Theebine to Bundaberg	STELEY ST. OLD BRUCE HIGHWAY	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_05110	Theebine to Bundaberg	WILLIAM STREET	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_05113	Theebine to Bundaberg	BUXTON RD (ISIS JUNCTION RD)	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05114	Theebine to Bundaberg	WOODGATE ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05117	Theebine to Bundaberg	WISES ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05118	Theebine to Bundaberg	SUB-STATION ACCESS ROAD	3. PRIVATE	R3. PASSIVE - STOP

ASSET CODE	CORRIDOR	CROSSING NAME	CROSSING TYPE	CROSSING PROTECTION
LXR_05119	Theebine to Bundaberg	THOMASEN ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05120	Theebine to Bundaberg	VERDANT SIDING ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05121	Theebine to Bundaberg	THABEBAN ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05122	Theebine to Bundaberg	MAYNARD ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05620	Theebine to Bundaberg	PROPERTY ACCESS ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_06117	Theebine to Bundaberg	PRIVATE ACCESS ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_06548	Theebine to Bundaberg	MAIN STREET	1. PUBLIC	R3. PASSIVE - STOP
LXR_06904	Theebine to Bundaberg	QR MAINTENANCE ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_00631	Theebine to Bundaberg	WALKER ST. BUNDABERG-PORT RD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00644	Bundaberg to Parana	BLACKALL ST. PEDESTRIAN ACCESS	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00654	Bundaberg to Parana	AWOONGA DAM ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00672	Bundaberg to Parana	BOOLOONGIE ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00673	Bundaberg to Parana	RED HILL ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00686	Bundaberg to Parana	BOURBONG STREET	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00687	Bundaberg to Parana	PERRY STREET	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_00688	Bundaberg to Parana	HANBURY STREET	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_00793	Bundaberg to Parana	BUNDABERG / GIN GIN ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00839	Bundaberg to Parana	TURKEY BEACH ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00879	Bundaberg to Parana	JOHN CLIFFORD ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00898	Bundaberg to Parana	MEADOWVALE ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00913	Bundaberg to Parana	BAFFLE CREEK ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_00923	Bundaberg to Parana	MOORLAND ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_01088	Bundaberg to Parana	YANDARAN ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_01708	Bundaberg to Parana	OAKWOOD SCHOOL ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_01722	Bundaberg to Parana	RODDS BAY ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_03000	Bundaberg to Parana	PROPERTY ACCESS ROAD	3. PRIVATE	R1. ACTIVE - LIGHTS

ASSET CODE	CORRIDOR	CROSSING NAME	CROSSING TYPE	CROSSING PROTECTION
LXR_03001	Bundaberg to Parana	PRIVATE ACCESS ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_03002	Bundaberg to Parana	PRIVATE ACCESS ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_03003	Bundaberg to Parana	LITTABELLA SIDING ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_03004	Bundaberg to Parana	DICKSON ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_03005	Bundaberg to Parana	MULLET CREEK ROAD	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_03007	Bundaberg to Parana	CAPELEC SUB STATION ACCESS RD	3. PRIVATE	R3. PASSIVE - STOP
LXR_03008	Bundaberg to Parana	PROPERTY ACCESS ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_03011	Bundaberg to Parana	SCOTTS ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_03013	Bundaberg to Parana	CHRISTENSEN ROAD	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_03016	Bundaberg to Parana	HUGHES ROAD	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_05624	Bundaberg to Parana	KOLAN STREET	1. PUBLIC	R3. PASSIVE - STOP
LXR_05625	Bundaberg to Parana	PROPERTY ACCESS ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_06112	Bundaberg to Parana	QR MAINTENANCE ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_06115	Bundaberg to Parana	PROPERTY ACCESS ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_06955	Bundaberg to Parana	QR MAINTENANCE ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_00810	Old Gympie Stn to Gympie North	RED HILL ROAD	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_00921	Old Gympie Stn to Gympie North	BRISBANE ROAD	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_01757	Maryborough Wst to Maryborough	PARALLEL TO KENT STREET	3. PRIVATE	R4. PASSIVE - GIVE WAY
LXR_04987	Maryborough Wst to Maryborough	MARCH STREET / KENT STREET	1. PUBLIC	R3. PASSIVE - STOP
LXR_04988	Maryborough Wst to Maryborough	LENNOX STREET	1. PUBLIC	R4. PASSIVE - GIVE WAY
LXR_04991	Maryborough Wst to Maryborough	PARALLEL WITH KENT STREET	3. PRIVATE	R4. PASSIVE - GIVE WAY
LXR_05000	Maryborough Wst to Maryborough	OFF KENT STREET	3. PRIVATE	R4. PASSIVE - GIVE WAY
LXR_05001	Maryborough Wst to Maryborough	PARALELL WITH KENT STREET	3. PRIVATE	R4. PASSIVE - GIVE WAY
LXR_05002	Maryborough Wst to Maryborough	PARALLEL WITH KENT STREET	3. PRIVATE	R4. PASSIVE - GIVE WAY
LXR_05004	Maryborough Wst to Maryborough	PARALLEL WITH KENT STREET	3. PRIVATE	R4. PASSIVE - GIVE WAY
LXR_05005	Maryborough Wst to Maryborough	GUAVA STREET	1. PUBLIC	R3. PASSIVE - STOP

ASSET CODE	CORRIDOR	CROSSING NAME	CROSSING TYPE	CROSSING PROTECTION
LXR_05007	Maryborough Wst to Maryborough	PARALLEL WITH KENT STREET	3. PRIVATE	R4. PASSIVE - GIVE WAY
LXR_05008	Maryborough Wst to Maryborough	OFF KENT STREET	3. PRIVATE	R4. PASSIVE - GIVE WAY
LXR_05009	Maryborough Wst to Maryborough	QUEENSPARK/SAILCLUB PEDEST ACC	1. PUBLIC	P3. PASSIVE
LXR_05010	Maryborough Wst to Maryborough	OPPOSITE MUDDY WATERS CAFÉ	1. PUBLIC	R4. PASSIVE - GIVE WAY
LXR_05011	Maryborough Wst to Maryborough	QUEENS PARK PEDESTRIAN ACCESS	1. PUBLIC	P3. PASSIVE
LXR_05012	Maryborough Wst to Maryborough	SUSSEX STREET	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_05013	Maryborough Wst to Maryborough	KENT STREET	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_05015	Maryborough Wst to Maryborough	MORNING ST. PEDESTRIAN ACCESS	1. PUBLIC	P3. PASSIVE
LXR_06549	Maryborough Wst to Maryborough	NAGEL STREET	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_06564	Maryborough Wst to Maryborough	CHEAPSIDE ST. PEDESTRIAN ACC	1. PUBLIC	P3. PASSIVE
LXR_06917	Maryborough Wst to Maryborough	MACALISTER TOURIST STN PED ACC	1. PUBLIC	P3. PASSIVE
LXR_07484	Maryborough Wst to Maryborough	QR MAINTENANCE ROAD	5. QR MAINTENANCE	P3. PASSIVE
LXR_04264	Theebine to Kingaroy	THEEBINE ROAD	1. PUBLIC	R4. PASSIVE - GIVE WAY
LXR_04265	Theebine to Kingaroy	THEEBINE ROAD	1. PUBLIC	R4. PASSIVE - GIVE WAY
LXR_05025	Interface Pt 15 to Moura	THEODORE ROAD	1. PUBLIC	R3. PASSIVE - STOP
LXR_05026	Interface Pt 15 to Moura	PRIVATE ACCESS ROAD	3. PRIVATE	R3. PASSIVE - STOP
LXR_06307	Taragoola to Interface Pt 12	MUIRHEAD STREET	1. PUBLIC	R1. ACTIVE - LIGHTS
LXR_06601	Taragoola to Interface Pt 12	IRONMONGER STREET	1. PUBLIC	R4. PASSIVE - GIVE WAY
LXR_06603	Taragoola to Interface Pt 12	BAKER ROAD	1. PUBLIC	R3. PASSIVE - STOP
LXR_06604	Taragoola to Interface Pt 12	TARAGOOLA ROAD	1. PUBLIC	R3. PASSIVE – STOP
LXR_06910	Taragoola to Interface Pt 12	PROPERTY ACCESS ROAD	3. PRIVATE	R3. PASSIVE – STOP
LXR_06640	Gladstone to Auckland Point	MARK FENTON DRIVE	1. PUBLIC	R3. PASSIVE - STOP
LXR_06799	Gladstone to Auckland Point	AUCKLAND STREET	1. PUBLIC	R2. ACTIVE - BOOM GATES
LXR_07269	Gladstone to Auckland Point	FRANCIS WARD DRIVE	1. PUBLIC	R4. PASSIVE - GIVE WAY
LXR_07325	Gladstone to Auckland Point	FRANCIS WARD DRIVE	1. PUBLIC	R4. PASSIVE - GIVE WAY

ASSET CODE	CORRIDOR	CROSSING NAME	CROSSING TYPE	CROSSING PROTECTION
LXR_07462	Gladstone to Auckland Point	MCCLINTOCK STREET	1. PUBLIC	P3. PASSIVE
LXR_07112	Owanyilla Woodchip Loop	HEATH ROAD	1. PUBLIC	R3. PASSIVE – STOP

APPENDIX D Speed Boards

KM Point	*Up Train[*] (to Roma Street)*	*Down Train[†] (to Cairns)*
104.975 km	70, 25	70
105.315 km	70	50
107.020 km	50, T60	40*, T50
107.245 km	40*, T50	50*, T60
107.535 km	50*, T60	60*, T75
109.380 km	60*, T75	90*, T110
110.490 km	90*, T110	100*, T125
112.595 km	100*, T125	90, 50R
112.991 km		120
113.545 km	120, 50L	120, T150
115.012 km	120, T150	120
115.329 km	120, T130	120, T150
117.407 km	120, T150	80, 50R
118.215 km		20 (Loop)
118.353 km	80, 25L	100*, T125
121.453 km	100*, T125	120, T150
122.315 km	120, T150	90*, T110
123.685 km	90*, T110	80*, 50L, T100
124.770 km	80*, 50R, T100	120, T150
128.839 km	120, T150	100*, T125
129.1280m	100*, T125	90*
130.548 km	90	50
130.765 km	50, T60	60, 25L
131.892 km	60, 25R	80, T100
132.550 km	80, T100	90*, T110
133.315 km	90*, T110	100*, T125
134.330 km	100*, T125	70, T85
135.695 km	70	60*, T75
137.370 km	60*, T75	70*, T85
138.194 km	70*, T85	120, T150
139.200 km	120, T150	60*
139.605 km	60*, T75	60*, 25L
140.439 km	60*, 25R, T70	40, T50
140.838 km	40*, T50	60*, T75

[*] Up Train – not verified

[†] Down Train - Track Recording Car Feb 2007 Verified DVD Desktop Audit

KM Point	Up Train* (to Roma Street)	Down Train† (to Cairns)
142.007 km	60*, T75	80*, T100
142.785 km	80*, T100	60, T75
143.078 km	60	40*, T50
143.402 km	40*, T50	70*, T85
144.398 km	70*, T85	50*, T60
144.855 km	50*, T60	70
145.252 km	70	70, 25L
145.585 km	70	50*, T60
145.957 km	50*, T60	60, T75
146.398 km	60, 25R, T75	60*
146.727 km	60	40*
147.732 km	40, T50	50*, T60
148.357 km	50*, T60	70*, T85
149.134 km	70*, T85	60*, T75
149.710 km	60*, T75	40*, T50
149.922 km	40*, T50	70
149.100 Km	70	70, 25L
150.960 km	70, 25R	70
151.260 km	70, T85	90
152.328 km	90, T105	120, T160
159.575 km	120, T160	70, 25L
161.168 km	70	60*, T75
161.445 km	60*, 25R, T75	40*, T50
163.110 km	40*, T50	50*, T60
163.570 km	50*, T60	80*, T100
164.505 km	80*, T100	100*, T125
166.085 km	100*, T125	60*, T75
166.415 km	60*, T75	80*, T100
166.950 km	80*, T100	100, T125
167.655 km	100, T120	120, 50L
168.616 km	120, 50R	120, T150
173.170 km	120, T150	120, 50LR
174.251 km	120, 50L	80
174.592 km	80, 25R	100*, T125
176.563 km	100*, T125	80*, T100
176.882 km	80*, T100	80*, 50R, T100
177.605 km	80*, T100	60*
177.755 km	60*, T70	80
177.875 km	80, 25L	80*, T100
182.550 km	80*, T100	100*, T125

KM Point	Up Train* (to Roma Street)	Down Train† (to Cairns)
185.273 km	100*, T125	80*, T100
186.130 km	80*, T100	90*, 50R, T110
187.360 km	90*, 50L, T110	90*, T110
187.640 km	90*, T110	70*, T85
188.337 km	70*, T85	80*, T100
189.814 km	80*, T100	100*, T125
191.010 km	100*, T125	90*, T110
192.265 km	90*, T110	80, 25R
193.185 km	80, 25L	100
194.280 km	100	120
196.300 km	120	100
196.890 km	100	120, T160
207.140 km	120, T160	80, 25LR
208.010 km	80, 25L	120
210.990 km	120, T150	70*, T85
211.325 km		90*, T110
212.460 km		120, T150
213.785 km		60*, T75
214.105 km		25R, 80*, T100
214.880 km	80*, T100	70, T80
215.015 km	70, 25R, T80	90
216.225 km	90	60, T75
216.515 km	60, T75	90
217.800 km	90	40
218.462 km	40*	120, T150
218.925 km	80	
220.695 km	120*	80, 25L
221.930 km	80, 25R	120, T150
225.040 km	120, T150	80*, T100
225.640 km	80, T100	100*, T125
225.852 km	100, T125	120, T150
227.010 km	120, T150	120, 25R
227.912 km	120, 25L	120, T150
231.819 km	120, T150	60*, T75
232.070 km	60, T75	80
232.790 km	80	60*, T75
233.110 km	60, T75	90
234.990 km	90	50
235.552 km	60	50, 25L
236.230 km	50, 25R, T60	50, T60
236.285 km		90*, T110
238.135 km		60*, T75

KM Point	Up Train* (to Roma Street)	Down Train† (to Cairns)
238.490 km		80*, T100
239.330 km		60*, T75
240.740 km		90*, T110
241.730 km	90, T110	60
242.300 km	60	60, 25L, T75
242.935 km	60*, T75	80
243.350 km	80, 25R	80
243.905 km	80	60*, T75
244.165 km	60*, T75	80*, T100
245.585 km	80*, T100	60*, T75
246.585 km	60*, T75	40*, T50
247.435 km	40*, T50	50*, T60
248.090 km	50*, T60	40*, T50
248.495 km	40*, T50	60*, T75
249.899 km	60*, T75	40
250.055 km	40	60, 25L
250.210 km	60*, T75	80, 25LR
251.100 km	80, 25LR, T80	60*, T75
251.370 km	60*, T75	80*, T100
252.180 km	80*, T100	120, T150
253.535 km	120, T150	60*, T75
253.775 km	60*, T75	70*, T85
254.595 km	70*, T85	60*, T75
254.830 km	60*, T75	80
255.560 km	80	60*, T75
255.830 km	60*, T75	60, 25L
256.595 km	60, 25R	60*, T75
256.930 km	60*, T75	120, T150
258.685 km	120, T150	90*, T110
259.180 km	90*, T110	70*, T85
259.860 km	70*, T85	80*, T100
260.600 km	80*, T100	60*, T75
261.785 km	60*, T75	80
262.160 km	80	80, 25LR
263.282 km	80, 25LR	120, T150
266.745 km	120, T150	110*, T135
268.935 km	110*, T135	120, T150
277.331 km	120, T150	80
277.485 km	80	80, 25L
278.380 km	80, 25R	120, T150
280.462 km	120, T150	T160
287.011 km	T160	T120

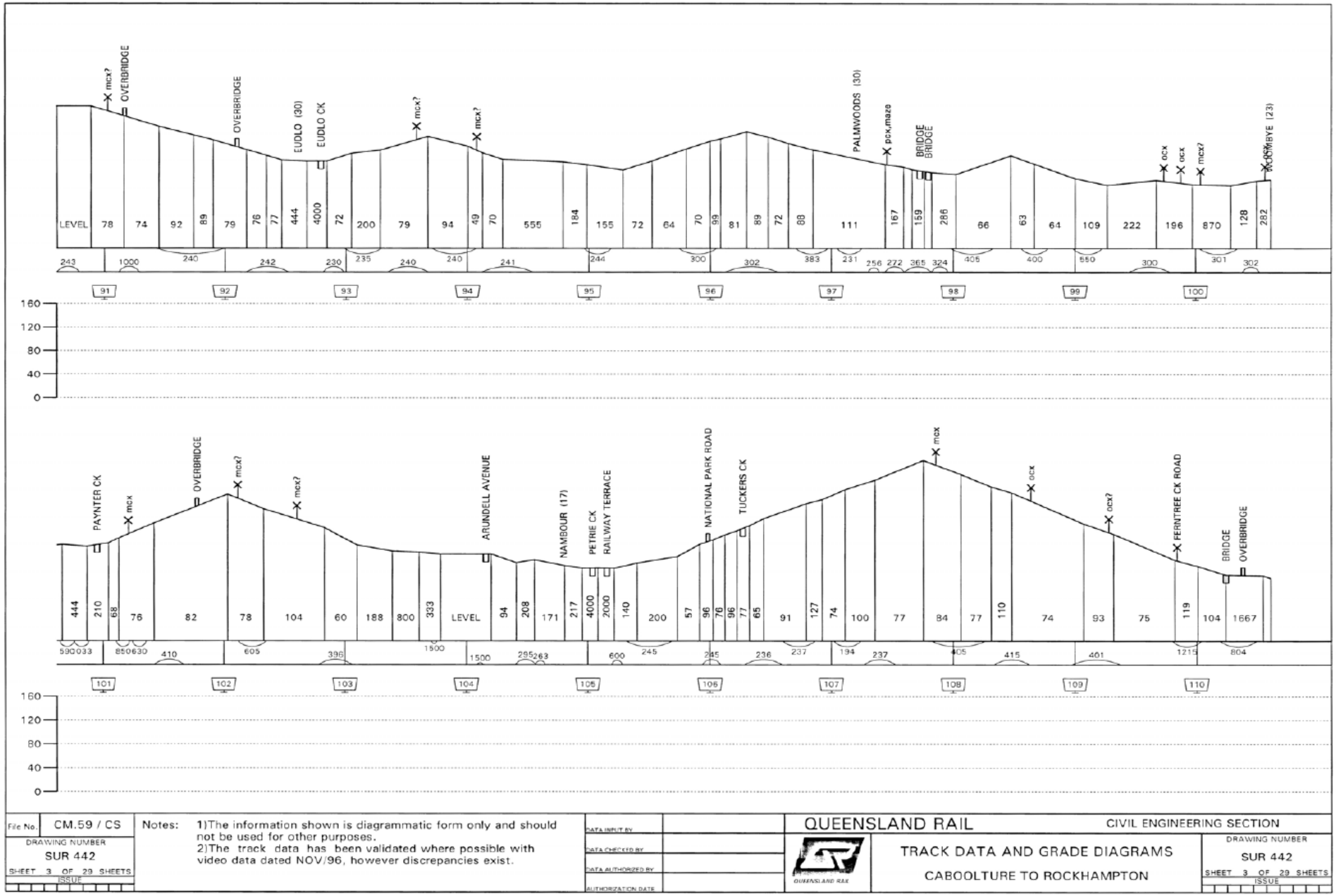
KM Point	Up Train* (to Roma Street)	Down Train† (to Cairns)
287.676 km	120, T150	80, 25R
288.582 km	80, 25L	120, T150
290.449 km	120, T150	90*, T110
290.710 km	90*, T110	100*, T125
292.284 km	100*, T125	70, 25R
293.260 km	70, 25L, T70	90*, T110
294.360 km	90*, T110	80*, T100
294.732 km	80*, T100	90*, T110
296.211 km	90*, T110	100*, T125
296.551 km	100*, T125	120, T150
297.727 km	120, T150	90*, T110
298.170 km	90*, T110	120, T150
299.498 km	120, T150	80*, T100
299.858 km	80*, T100	120, T150
301.600 km	120, T150	120, 50L, T150
302.500 km	120, T150	T120
302.585 km	120, 25R	120, T160
309.613 km	120, T160	80, 25L
309.660 km		50R
310.385 km	80, 25R, T80	120
310.605 km	120, 50L	120, T160
314.728 km	120, T160	90
315.401 km	90	80
315.832 km	80	60*, T75
316.044 km	60*, T75	90*, T110
316.718 km	90*, T110	120, T150
317.835 km	120, T150	90
319.080 km	90	70, 25R
319.579 km	70	80
319.980 km	80, 25L	120, T150
329.537 km	120, T150	120, 25R
330.457 km	120, 25L	120, T160
335.442 km	120, T160	T150
337.622 km	120, T150	90*, T110
337.918 km	90*, T110	60*, T75
338.213 km	60*, T75	80, 25L
338.335 km	80	120
339.106 km	120, 25R	120, T160
345.810 km	120, T160	90*, T110
346.058 km	90*, T110	120, T150
347.823 km	120, T150	80
348.190 km	80	

KM Point	Up Train* (to Roma Street)	Down Train† (to Cairns)
348.507 km	80, 25R	80*, T100
349.750 km	80, T100	80, 25LR
350.650 km	80	
351.255 km	25	15
352.333 km	15, T25	40, 15R
352.637 km		40
352.940 km	15L	
352.960 km		40
353.046 km	40	70
353.353 km	70	120, T160
359.745 km	120, T160	120, 25L, T160
359.960 km		25R
360.559 km	T160	
360.690 km		120, T150
371.181 km	120, T160	T150
374.400 km	120, T150	80
374.876 km	80	50*, T60
375.250 km	50*, T60	90*, 25L, T110
375.872 km	90*, T110	120, T150
376.130 km	120, 25R, T150	120, T150
379.691 km	120, T150	60*, T75
379.973 km	60*, T75	90*, T110
381.461 km	90*, T110	60*, T75
381.791 km	60*, T75	120
382.648 km	120, T150	60*, T75
382.840 km	60*, T75	120, T150
384.150 km	120, T150	120, 25R
385.030 km	120, 25L	120
386.060 km	120	90*, T110
386.400 km	90*, T110	120, T150
389.101 km	120, T150	60*, T75
391.043 km	60*, T75	120, T160
400.535 km	120, T160	120, 50R, T160
401.605 km	120, 50L, T160	120, T160
405.220 km	120, T160	90, T110
405.542 km	90*, T110	120, T160
410.352 km	120, T160	T150
412.010 km	120, T150	90*, T110
412.810 km	90*, T110	90*, 25R, T110
413.700 km	90*, T110	60*, T75
413.750 km	60*, 25L, T75	60*, T75
414.290 km	60*, T75	50*, T60

KM Point	Up Train* (to Roma Street)	Down Train† (to Cairns)
414.651 km	50*, T60	60*, T75
415.126 km	60*, T75	80
415.663 km	T80	
416.480 km	T100	T80
417.380 km	80	90*, T110
417.783 km	90*, T110	120, T150
419.410 km	120, T150	50*, T60
420.068 km	50*, T60	70
420.252 km	T70	T85
420.854 km	70*, T85	120, T150
422.343 km	120, T150	90*, T110
422.846 km	90*, T110	120, T160
423.802 km	120, T160	120, 50L, T160
424.947 km	120, 50R, T160	120, T160
434.490 km	120, T160	120, 50R, T160
435.465 km	120, 50L, T160	120, T160
444.1008 km	120, T160	90*, T110
445.415 km	90*, T110	120, T150
446.485 km	120, T150	120, 25R, T150
447.394 km	120, 25L, T150	80*, T100
447.829 km	80*, T100	120, T160
455.143 km	120, T160	90*, T110
455.405 km	90*, T110	100*, T125
456.044 km	100*, T125	120, T160
459.690 km	120, T160	120, 25R, T160
460.650 km	120, 25L, T160	120, T160
461.213 km	120, T160	100*, T125
461.646 km	100*, T125	120, T150
463.474 km	120, T150	100*, T125
464.007 km	100*, T125	120, T150
466.649 km	120, T150	90*, T110
467.170 km	90*, T110	80
467.600 km	80	120, T160
471.230 km	120, T160	120, 25R, T160
472.303 km	120, 25L, T160	120, T160
474.253 km	120, T160	120, T150
476.437 km	120, T150	80*, T100
477.018 km	80*, T100	60
477.957 km	60	50*, T60
478.110 km	50*, T60	60*, T75
478.880 km	60*, T75	80*, T100
479.714 km	80*, T100	50*, T60

KM Point	*Up Train* (to Roma Street)*	*Down Train† (to Cairns)*
479.999 km	50*, T60	60
480.494 km	60	120, T150
484.760 km	120, T150	90*, T110
485.620 km	90*, T110	60, 25L
486.753 km	60, 25R	60*, T75
487.148 km	60*, T75	120, T160
498.874 km	120, T160	T150, 80*
499.829 km	120, T150	T100
500.100 km	80*, T100	120, T150
506.320 km	120, T150	100*, 25R, T125
507.220 km	100, 25L, T125	100*, T125
507.638 km	100*, T125	120, T150
512.220 km		T120
515.168 km	120, T150	100*, T125
518.880 km	100*, T125	120, T150
521.340 km	120, T150	120, 50L, T150
522.410 km	120, T150	100, T120
522.495 km	50R, T120	100
522.841 km	100	80, 50L
523.042 km	100	50*, T60
523.937 km	50*, T60	80*, T100
527.740 km	80*, T100	80, 25R

APPENDIX E Track Data & Grade Diagrams


mcx?
OVERBRIDGE
OVERBRIDGE
EUDLO (30)
EUDLO CK
mcx?
mcx?
PALMWOODS (30)
pcx,maze
BRIDGE
BRIDGE
ocx
ocx
mcx?
MOOMBYE (23)
LEVEL 78 74 92 89 79 76 77 444 4000 72 200 79 94 49 70 555 184 155 72 64 70 99 81 89 72 88 111 167 159 286 66 63 64 109 222 196 870 128 282
243 1000 240 242 230 235 240 240 241 244 300 302 383 231 256 272 365 324 405 400 550 300 301 302
91 92 93 94 95 96 97 98 99 100
160 120 80 40 0
PAYNTER CK
mcx
OVERBRIDGE
mcx?
mcx?
ARUNDELL AVENUE
NAMBOUR (17)
PETRIE CK
RAILWAY TERRACE
NATIONAL PARK ROAD
TUCKERS CK
mcx
ocx
ocx?
FERNTREE CK ROAD
BRIDGE
OVERBRIDGE
444 210 68 76 82 78 104 60 188 800 333 LEVEL 94 208 171 217 4000 2000 140 200 57 96 76 96 77 65 91 127 74 100 77 84 77 110 74 93 75 119 104 1667
590033 850630 410 605 396 1500 1500 295263 600 245 245 236 237 194 237 405 415 401 1215 804
101 102 103 104 105 106 107 108 109 110
160 120 80 40 0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 3 OF 29 SHEETS
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DRAWING NUMBER SUR 442
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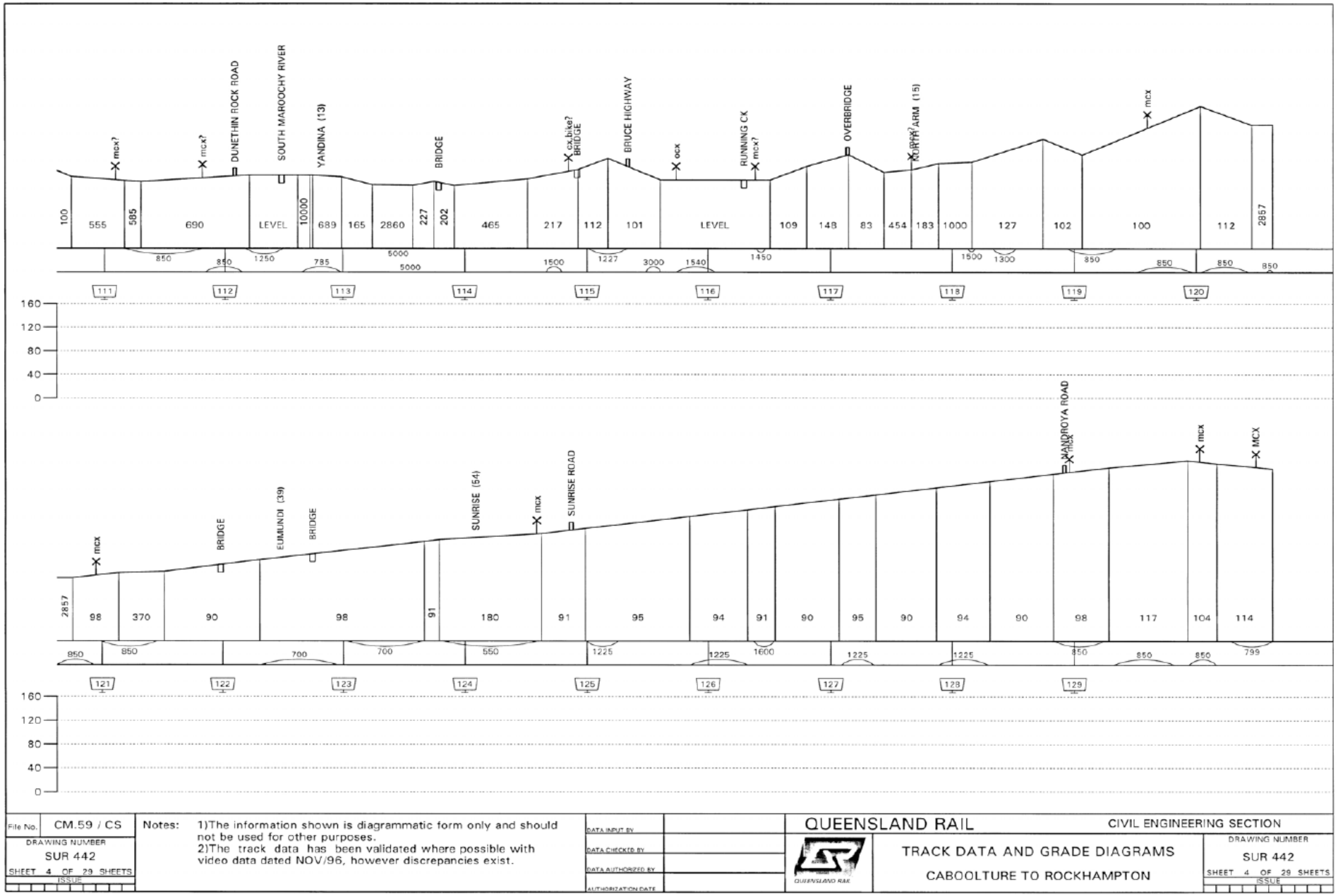
DUNETHIN ROCK ROAD
SOUTH MAROOCHY RIVER
YANDINA (13)
BRIDGE
BRUCE HIGHWAY
RUNNING CK
OVERBRIDGE
ARM (15)
BRIDGE
EUMUNDI (39)
BRIDGE
SUNRISE (54)
SUNRISE ROAD
MAROOCHYDORE ROAD
LEVEL
LEVEL
160
120
80
40
0
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
File No. CM.59 / CS
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SHEET 4 OF 29 SHEETS
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SHEET 4 OF 29 SHEETS
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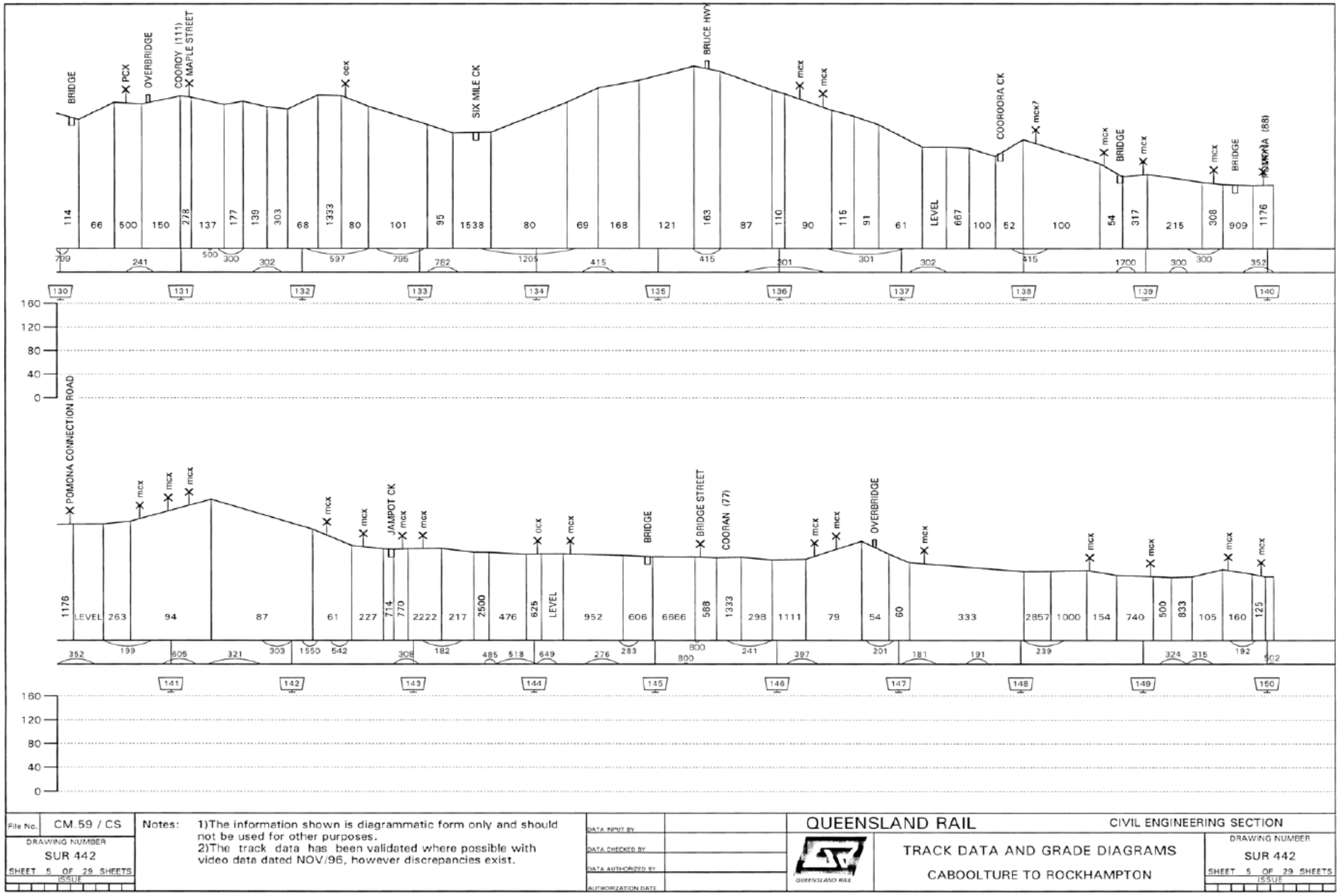
BRIDGE
PCX
OVERBRIDGE
COOROY (111)
MAPLE STREET
SIX MILE CK
BRUCE HWY
COOROORA CK
BRIDGE
BRIDGE
POMONA CONNECTION ROAD
JAMPOT CK
BRIDGE STREET
COORAN (77)
OVERBRIDGE
LEVEL
160
120
80
40
0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 5 OF 29 SHEETS
ISSUE
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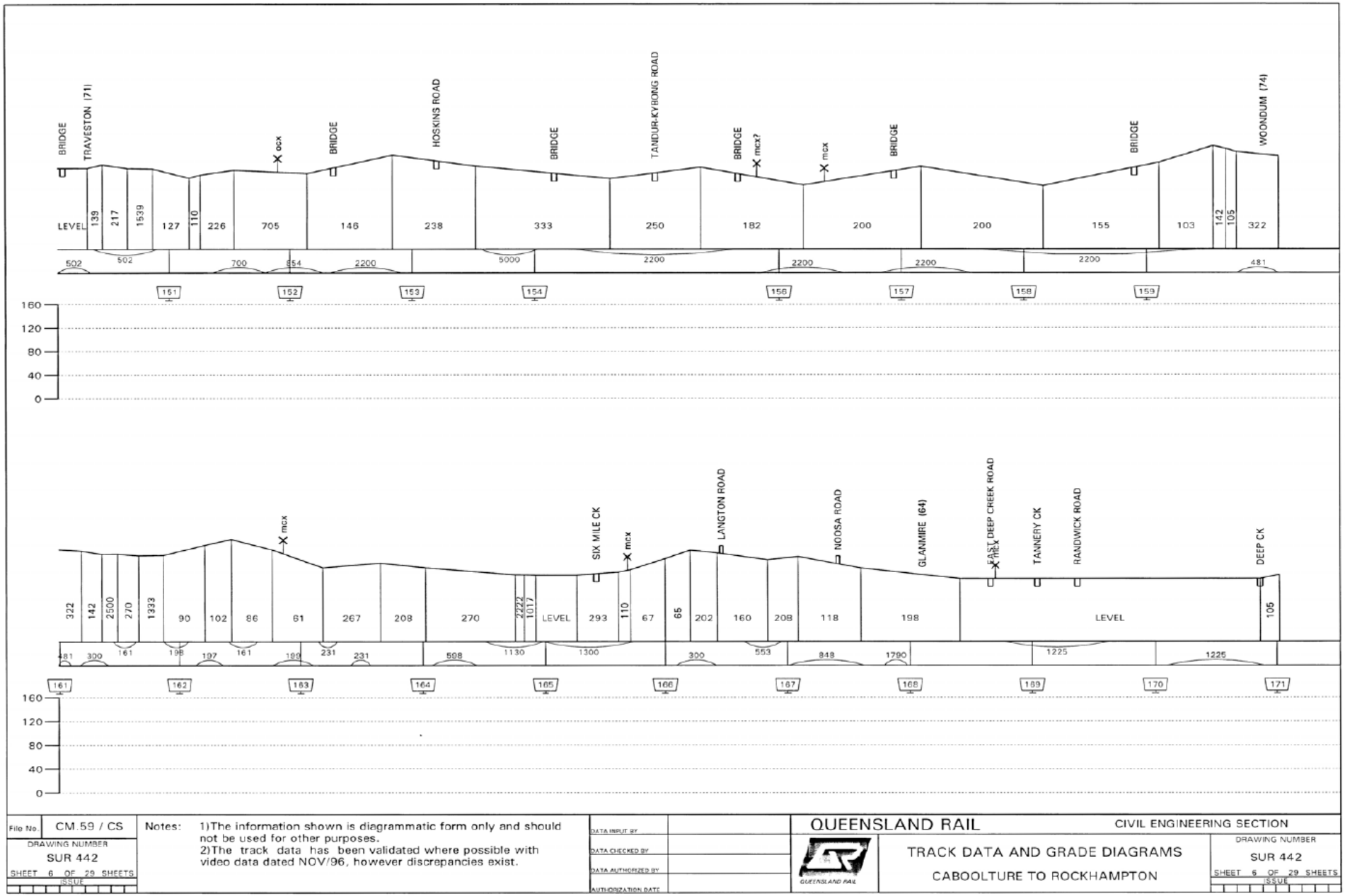
SHEET 5 OF 29 SHEETS
ISSUE



File No. CM.59 / CS	Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes. 2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.	DATA INPUT BY	QUEENSLAND RAIL — CIVIL ENGINEERING SECTION
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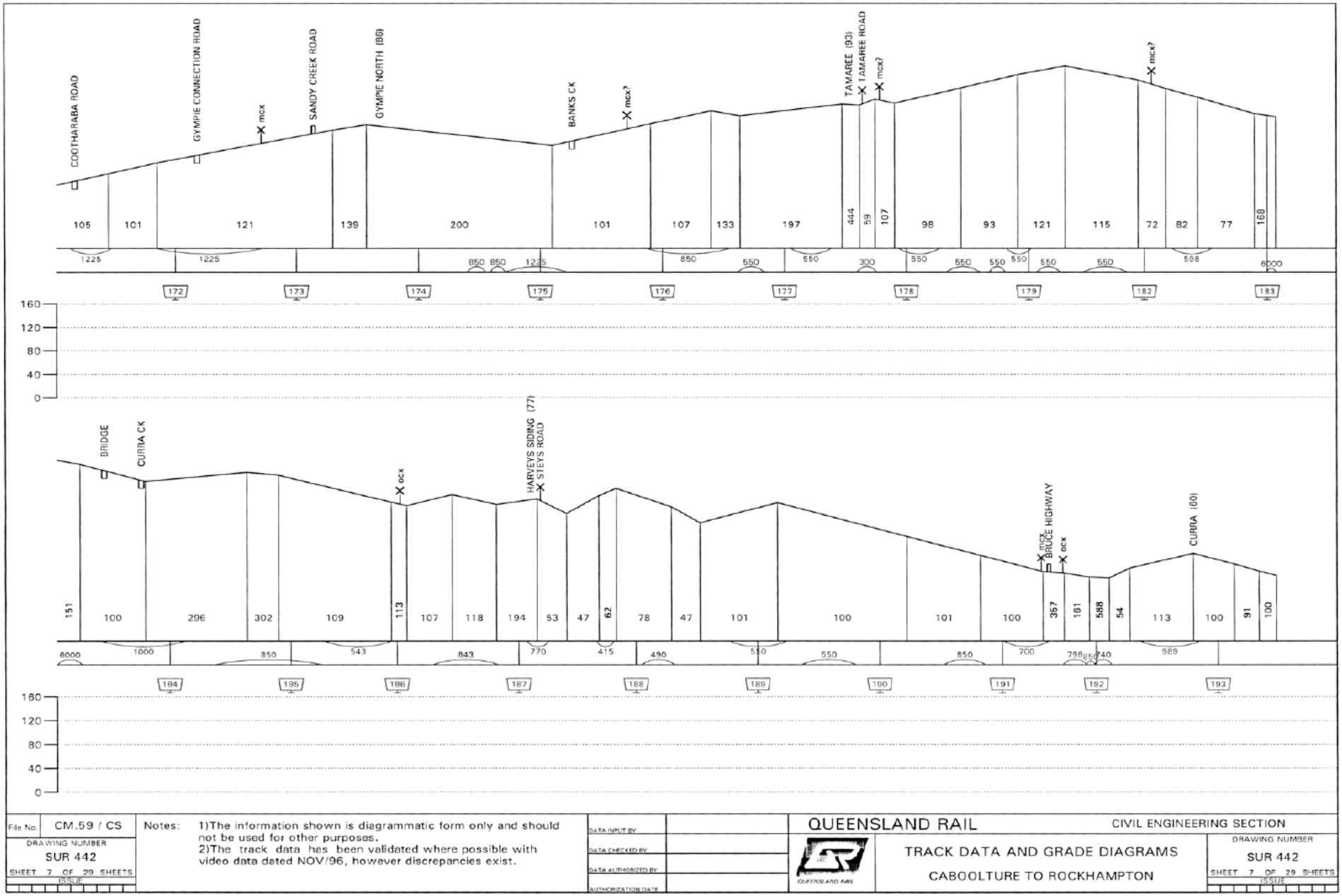
SHEET 6 OF 29 SHEETS		DATA AUTHORIZED BY	CABOOLTURE TO ROCKHAMPTON
ISSUE		AUTHORIZATION DATE	DRAWING NUMBER SUR 442 — SHEET 6 OF 29 SHEETS — ISSUE


COOTHARABA ROAD
GYMPIE CONNECTION ROAD
mcx
SANDY CREEK ROAD
GYMPIE NORTH (86)
BANKS CK
mcx?
TAMAREE (93)
TAMAREE ROAD
mcx?
mcx?
105 101 121 139 200 101 107 133 197 444 59 107 98 93 121 115 72 82 77 168
1225 1225 850 850 1225 850 550 550 300 550 550 550 550 550 550 598 6000
172 173 174 175 176 177 178 179 182 183
160 120 80 40 0
BRIDGE
CURRA CK
ocx
HARVEYS SIDING (77)
STEYS ROAD
BRUCE HIGHWAY
mcx
ocx
CURRA (60)
151 100 296 302 109 113 107 118 194 53 47 62 78 47 101 100 101 100 357 161 588 54 113 100 91 100
6000 1000 850 543 843 770 415 490 550 550 850 700 798 740 989
184 185 186 187 188 189 190 191 192 193
160 120 80 40 0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 7 OF 29 SHEETS
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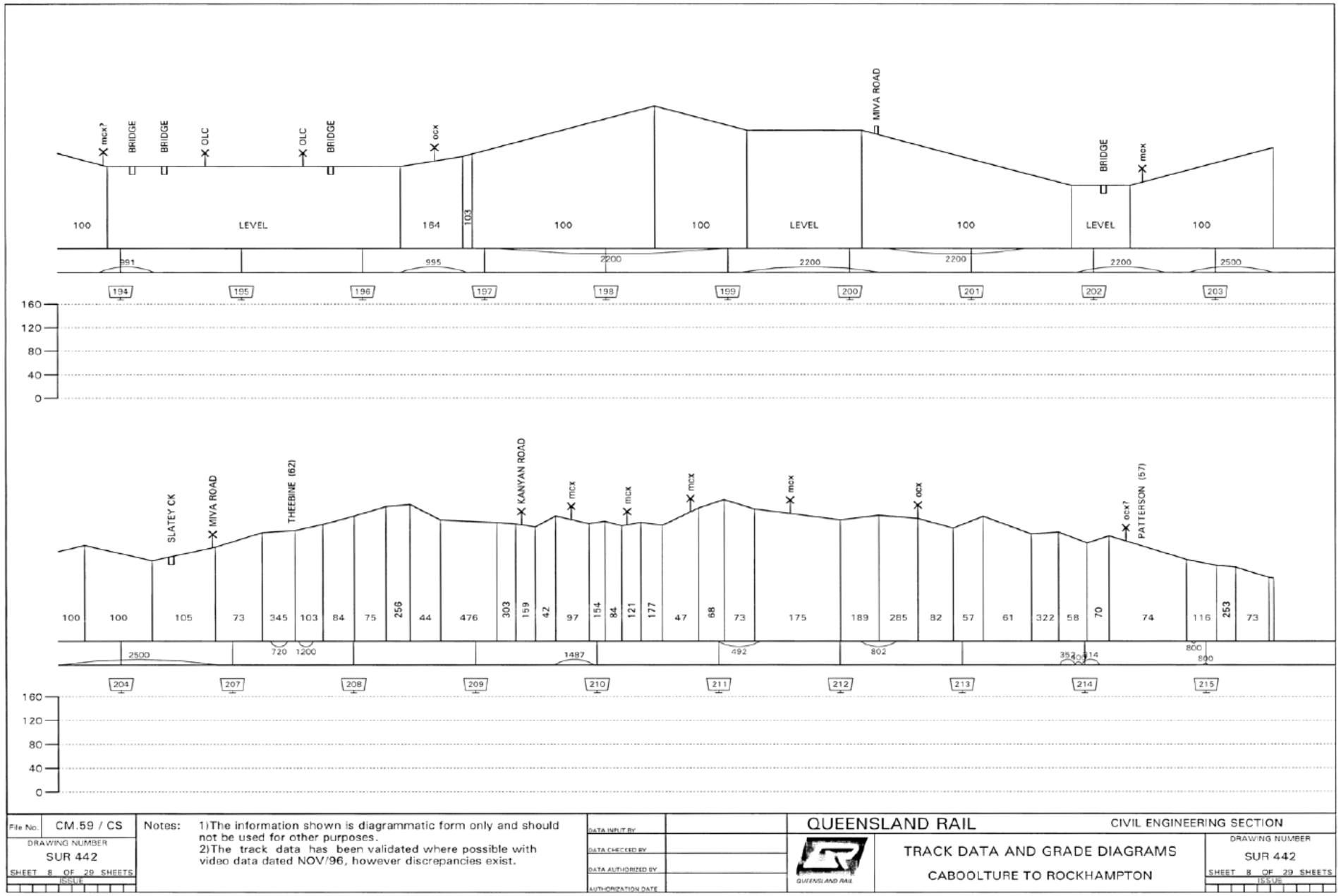
DRAWING NUMBER SUR 442
SHEET 7 OF 29 SHEETS
ISSUE


mcx?
BRIDGE
BRIDGE
OLC
OLC
BRIDGE
ocx
MIVA ROAD
BRIDGE
mcx
100
LEVEL
184
103
100
100
LEVEL
100
LEVEL
100
291
995
2200
2200
2200
2200
2500
194
195
196
197
198
199
200
201
202
203
160
120
80
40
0
SLATEY CK
MIVA ROAD
THEEBINE (62)
KANYAN ROAD
mcx
mcx
mcx
mcx
ocx
ocx?
PATTERSON (57)
100
100
105
73
345
103
84
75
256
44
476
303
159
42
97
154
84
121
177
47
68
73
175
189
285
82
57
61
322
58
70
74
116
253
73
2500
720
1200
1487
492
802
352
614
800
800
204
207
208
209
210
211
212
213
214
215
160
120
80
40
0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 8 OF 29 SHEETS
ISSUE
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DATA INPUT BY
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DATA AUTHORIZED BY
AUTHORIZATION DATE
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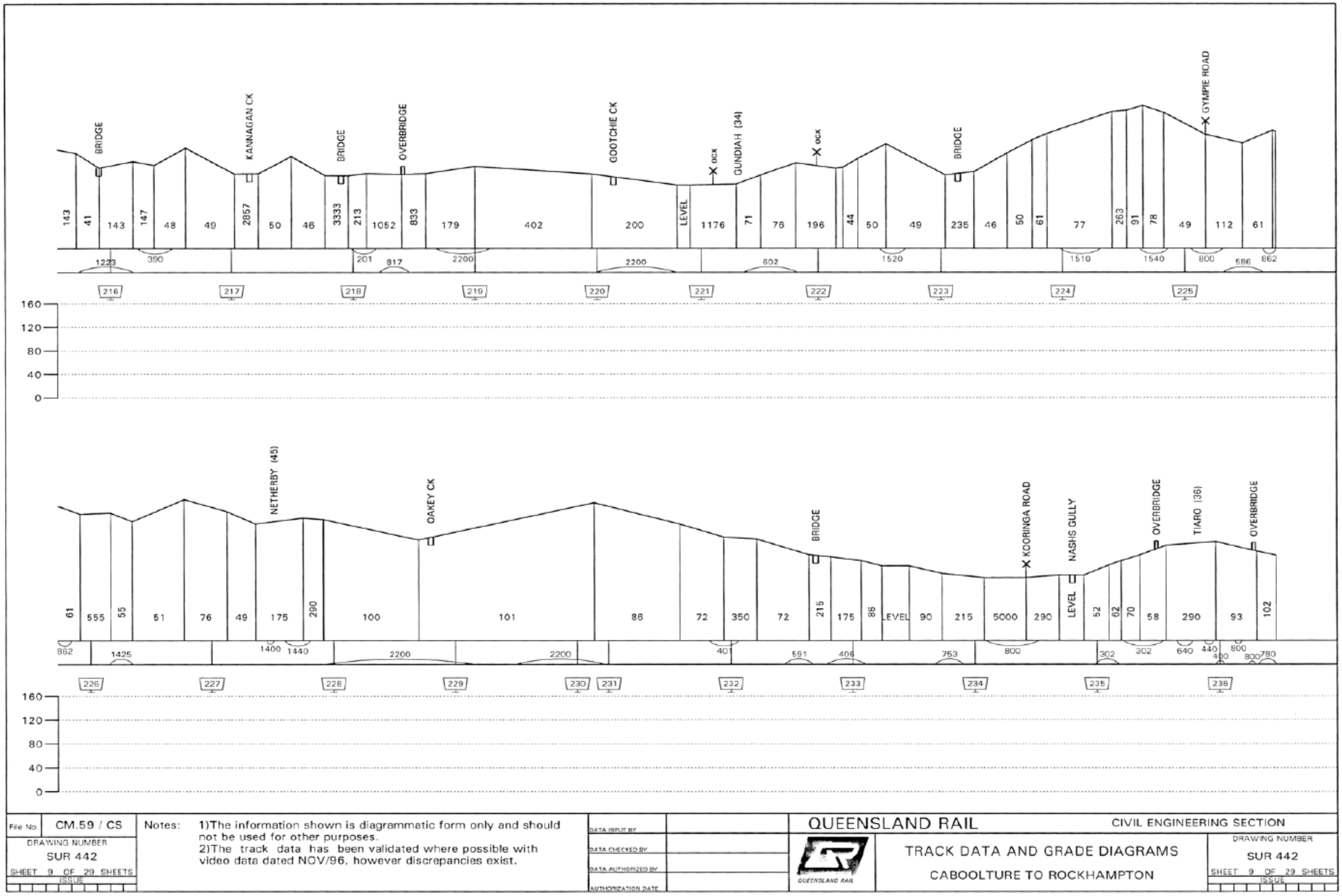
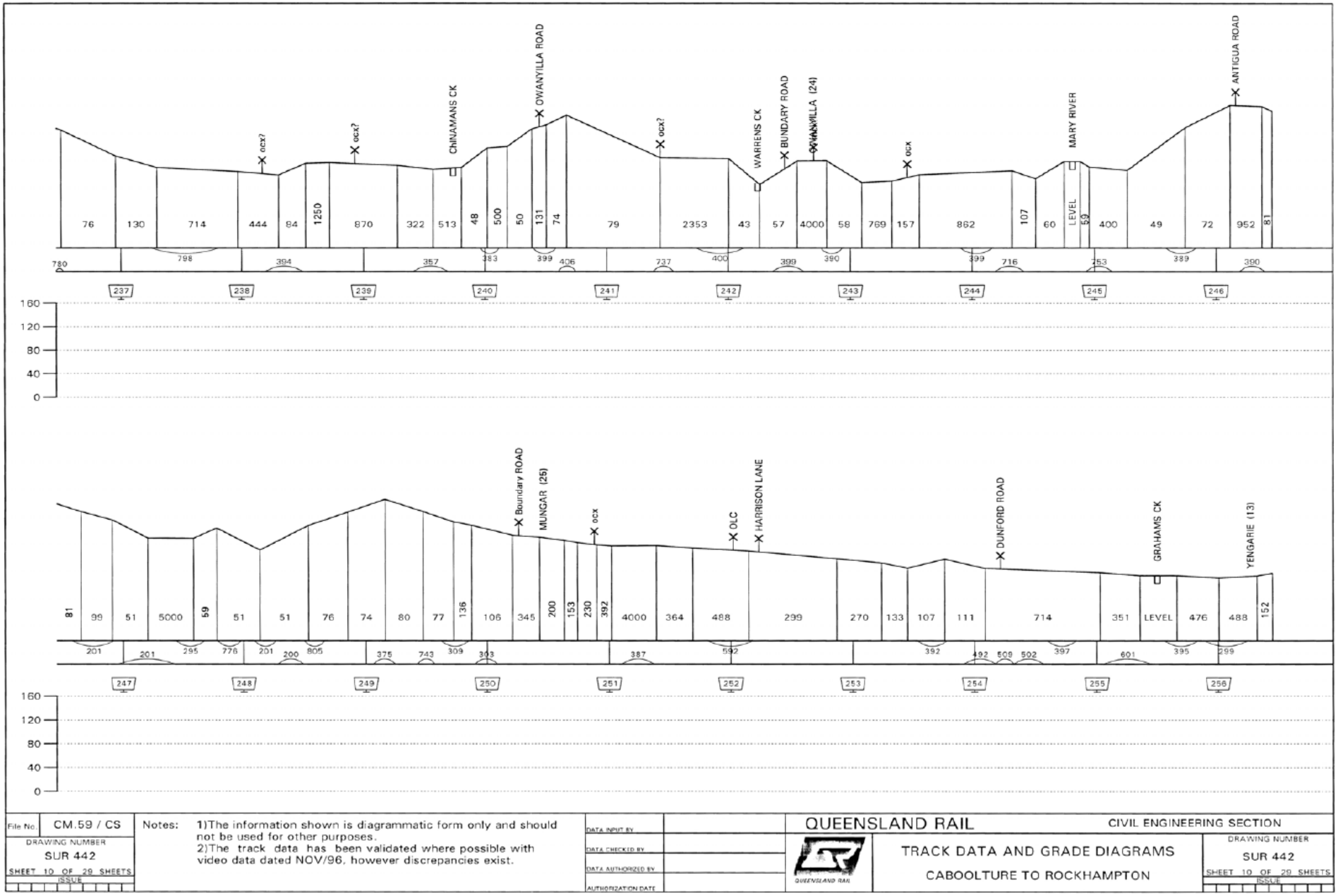
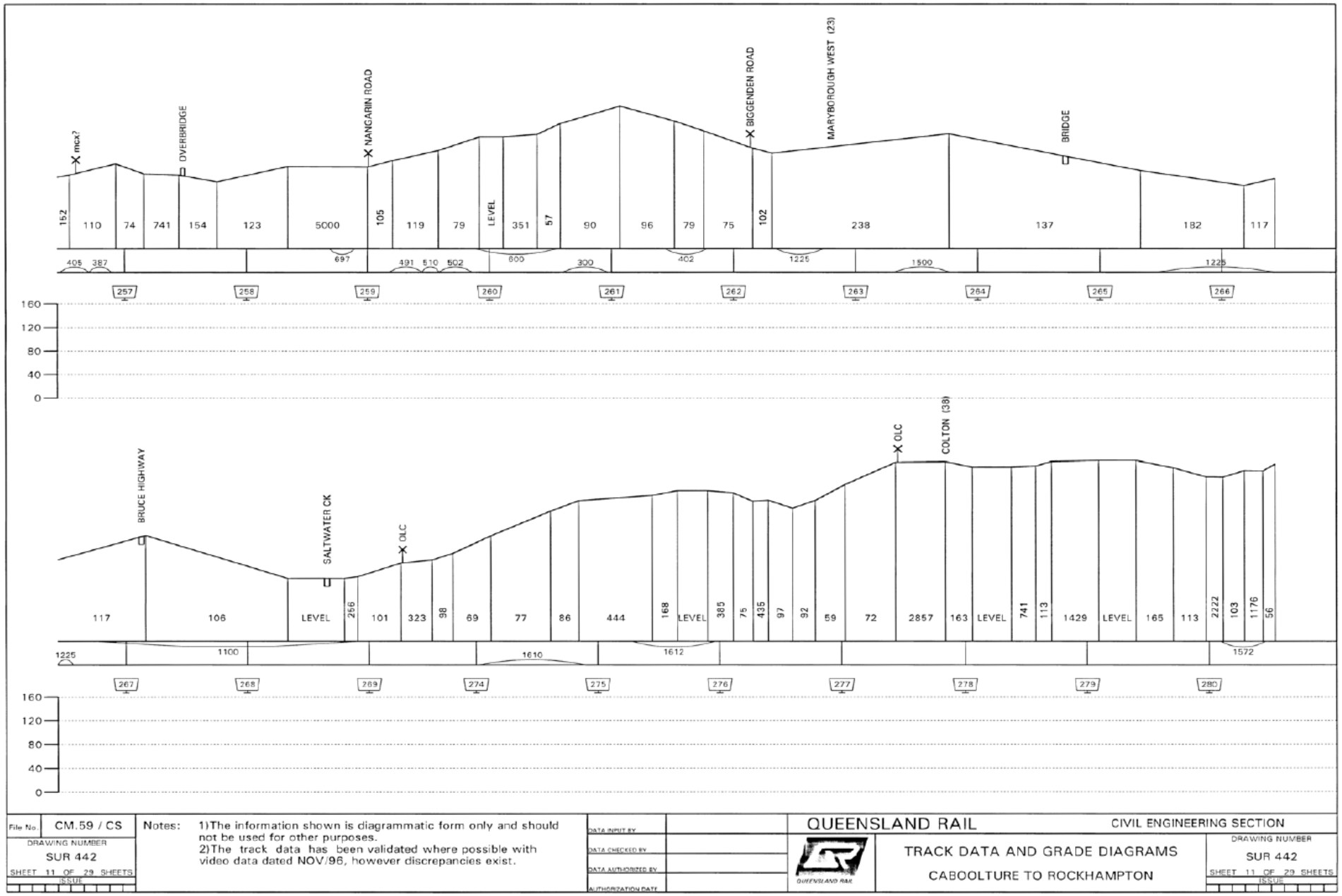
QUEENSLAND RAIL
TRACK DATA AND GRADE DIAGRAMS
CABOOLTURE TO ROCKHAMPTON
DRAWING NUMBER SUR 442
SHEET 8 OF 29 SHEETS
ISSUE



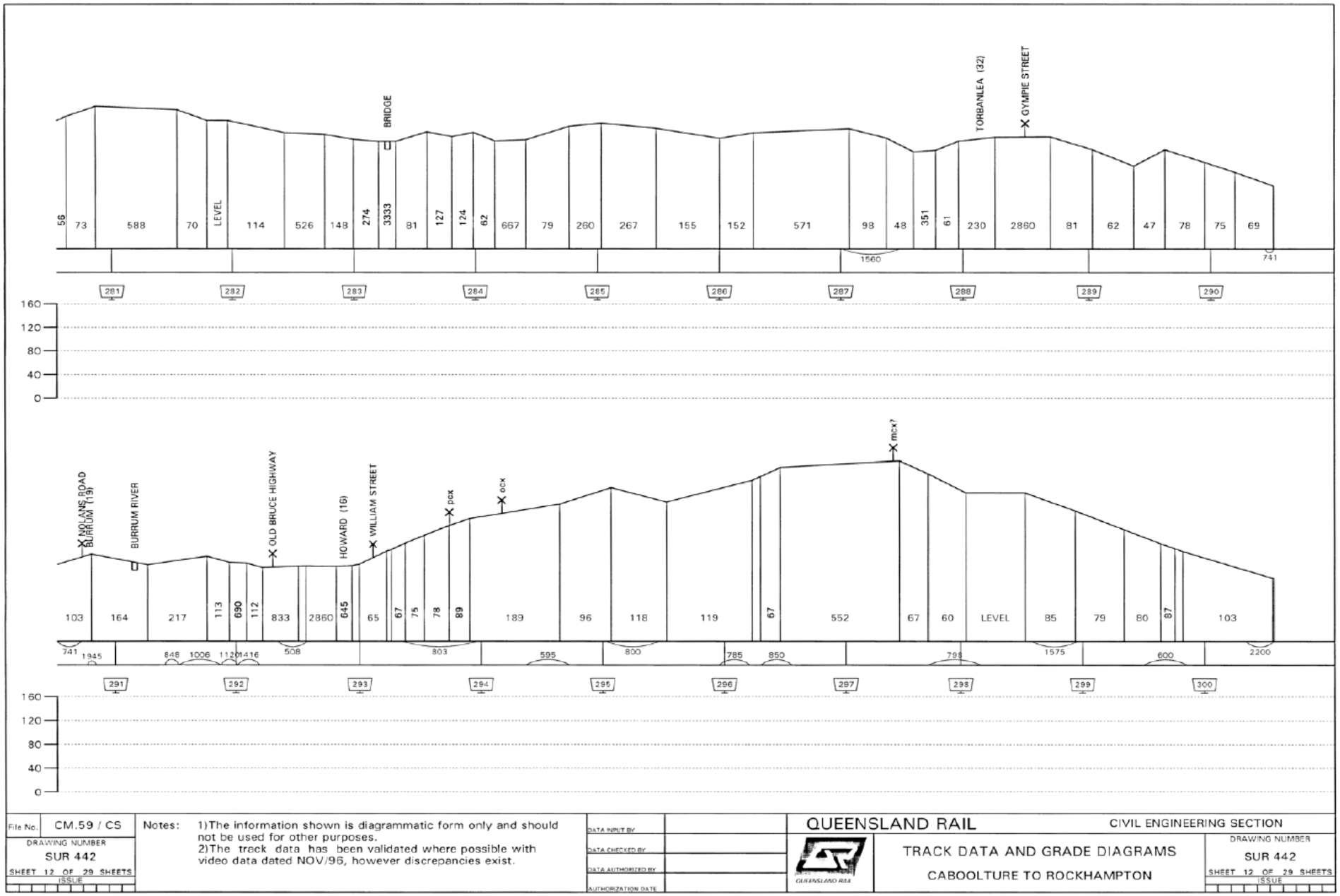
File No. CM.59 / CS DRAWING NUMBER SUR 442 SHEET 9 OF 29 SHEETS ISSUE	Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes. 2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.	DATA INPUT BY DATA CHECKED BY DATA AUTHORIZED BY AUTHORIZATION DATE		QUEENSLAND RAIL QUEENSLAND RAIL	CIVIL ENGINEERING SECTION TRACK DATA AND GRADE DIAGRAMS CABOOLTURE TO ROCKHAMPTON	DRAWING NUMBER SUR 442 SHEET 9 OF 29 SHEETS ISSUE

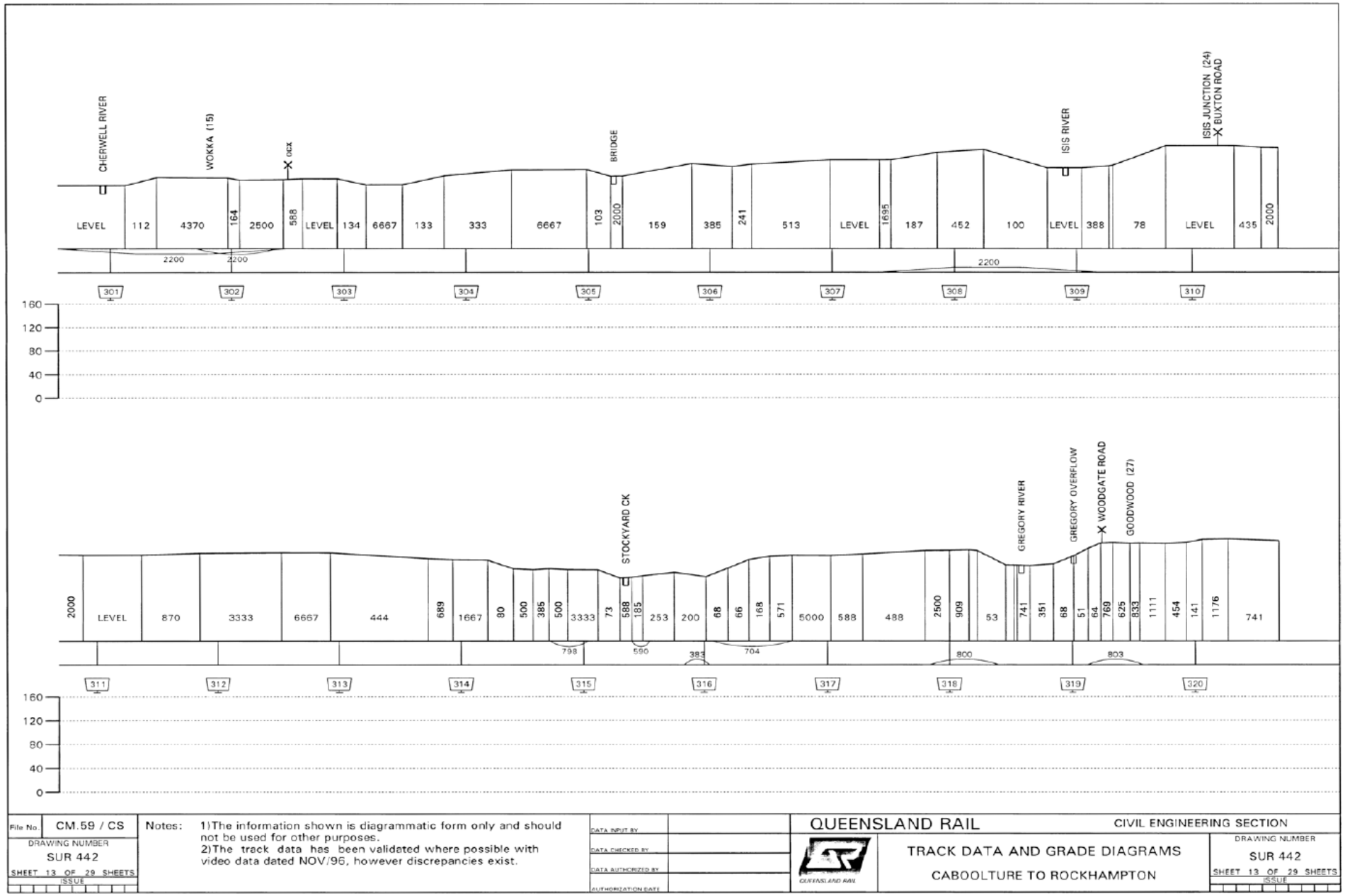


File No. CM.59 / CS	Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes. 2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.	DATA INPUT BY		QUEENSLAND RAIL	CIVIL ENGINEERING SECTION
DRAWING NUMBER SUR 442		DATA CHECKED BY		QUEENSLAND RAIL	TRACK DATA AND GRADE DIAGRAMS CABOOLTURE TO ROCKHAMPTON
SHEET 10 OF 29 SHEETS		DATA AUTHORIZED BY			DRAWING NUMBER SUR 442
ISSUE		AUTHORIZATION DATE			SHEET 10 OF 29 SHEETS ISSUE

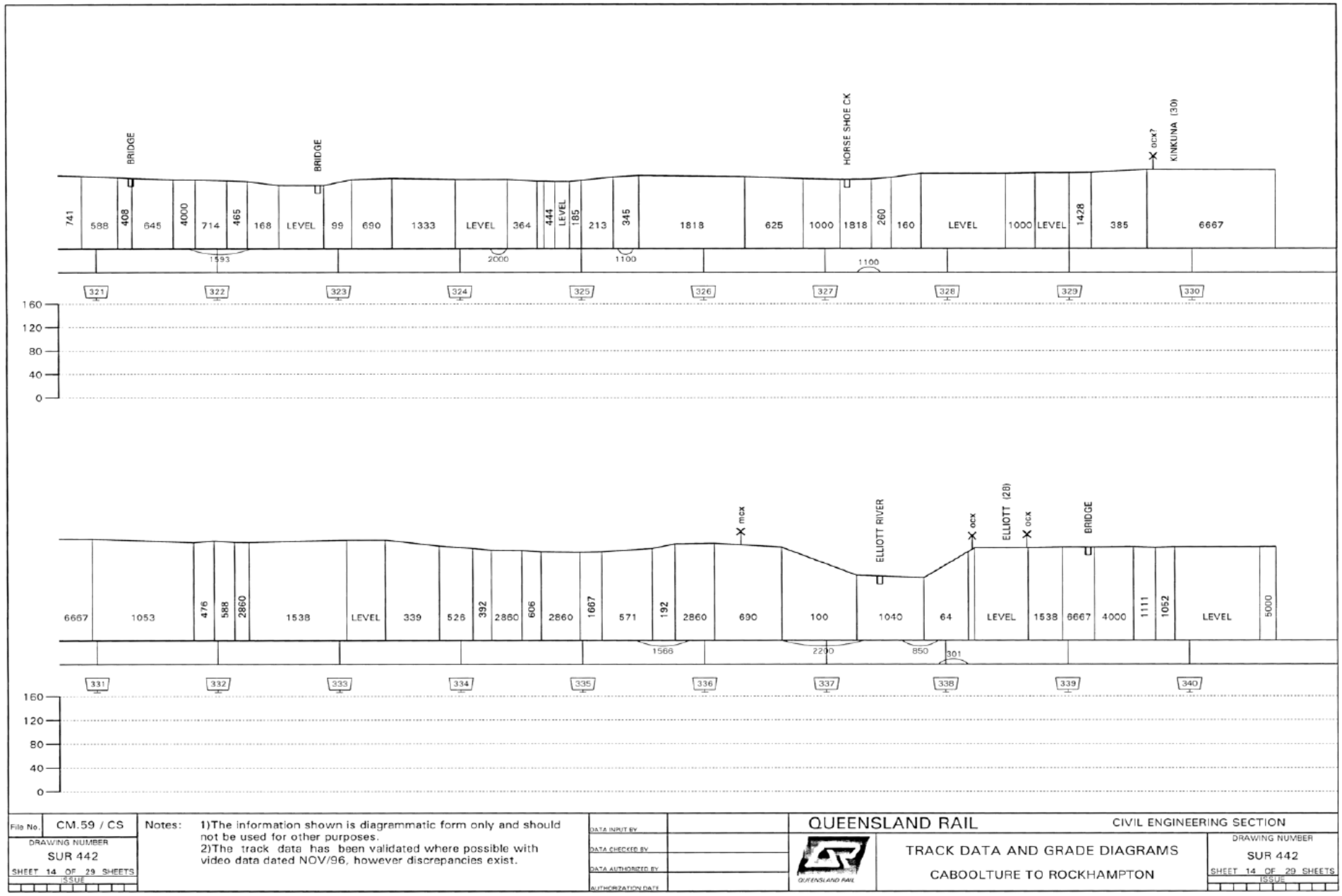


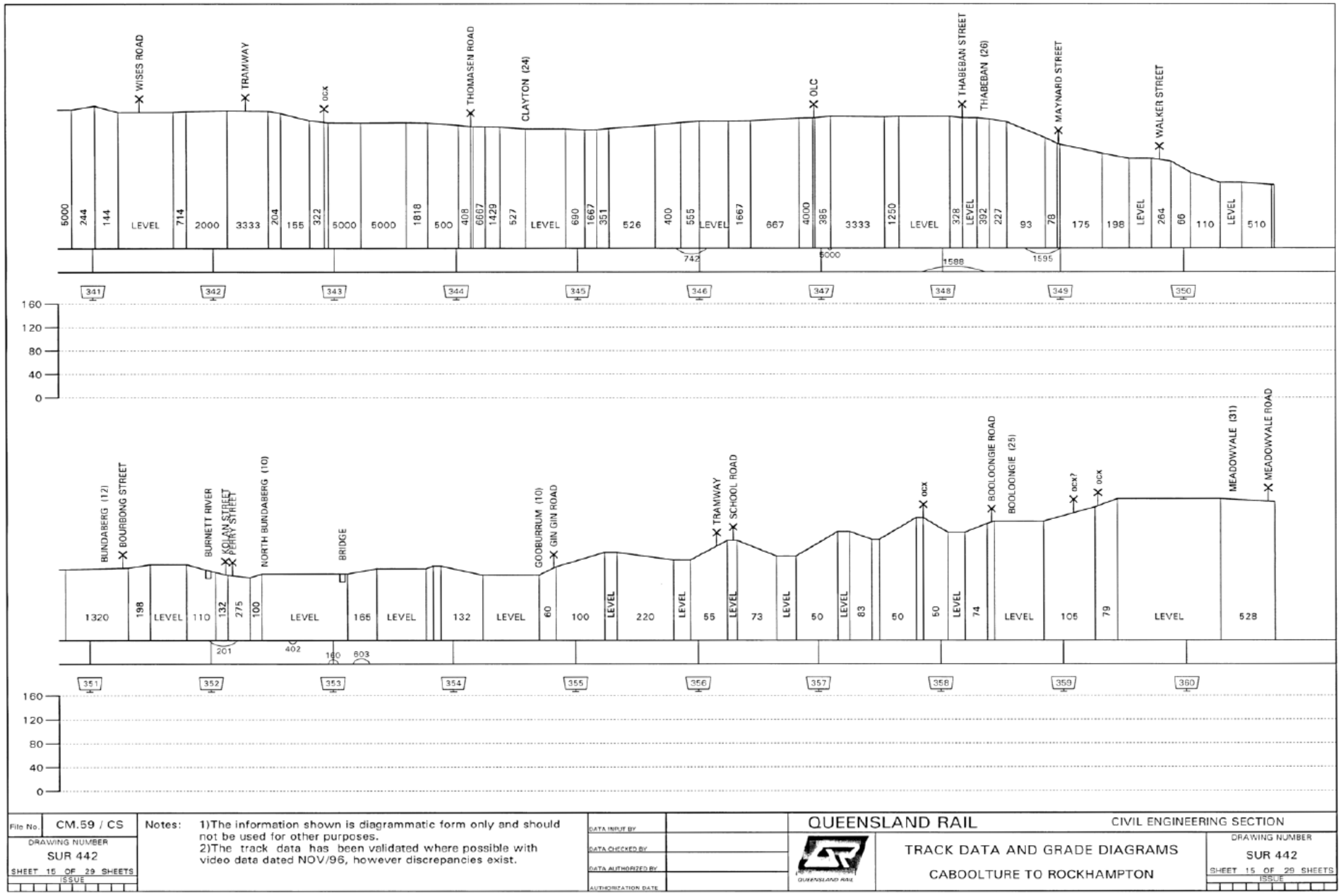
File No. CM.59 / CS DRAWING NUMBER SUR 442 SHEET 11 OF 29 SHEETS ISSUE	Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes. 2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.	DATA INPUT BY DATA CHECKED BY DATA AUTHORIZED BY AUTHORIZATION DATE	QUEENSLAND RAIL QUEENSLAND RAIL	CIVIL ENGINEERING SECTION TRACK DATA AND GRADE DIAGRAMS CABOOLTURE TO ROCKHAMPTON	DRAWING NUMBER SUR 442 SHEET 11 OF 29 SHEETS ISSUE


BRIDGE
TORBANLEA (32)
GYMPIE STREET
LEVEL
1560
741
281
282
283
284
285
286
287
288
289
290
160
120
80
40
0
NOLANS ROAD
BURRUM (19)
BURRUM RIVER
OLD BRUCE HIGHWAY
HOWARD (16)
WILLIAM STREET
pcx
ocx
mcx?
LEVEL
1945
1006
1120
1416
508
803
595
800
785
850
798
1575
600
2200
291
292
293
294
295
296
297
298
299
300
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 12 OF 29 SHEETS
ISSUE
Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes.
2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.
DATA INPUT BY
DATA CHECKED BY
DATA AUTHORIZED BY
AUTHORIZATION DATE
QUEENSLAND RAIL
CIVIL ENGINEERING SECTION
QUEENSLAND RAIL
TRACK DATA AND GRADE DIAGRAMS
CABOOLTURE TO ROCKHAMPTON
DRAWING NUMBER SUR 442
SHEET 12 OF 29 SHEETS
ISSUE

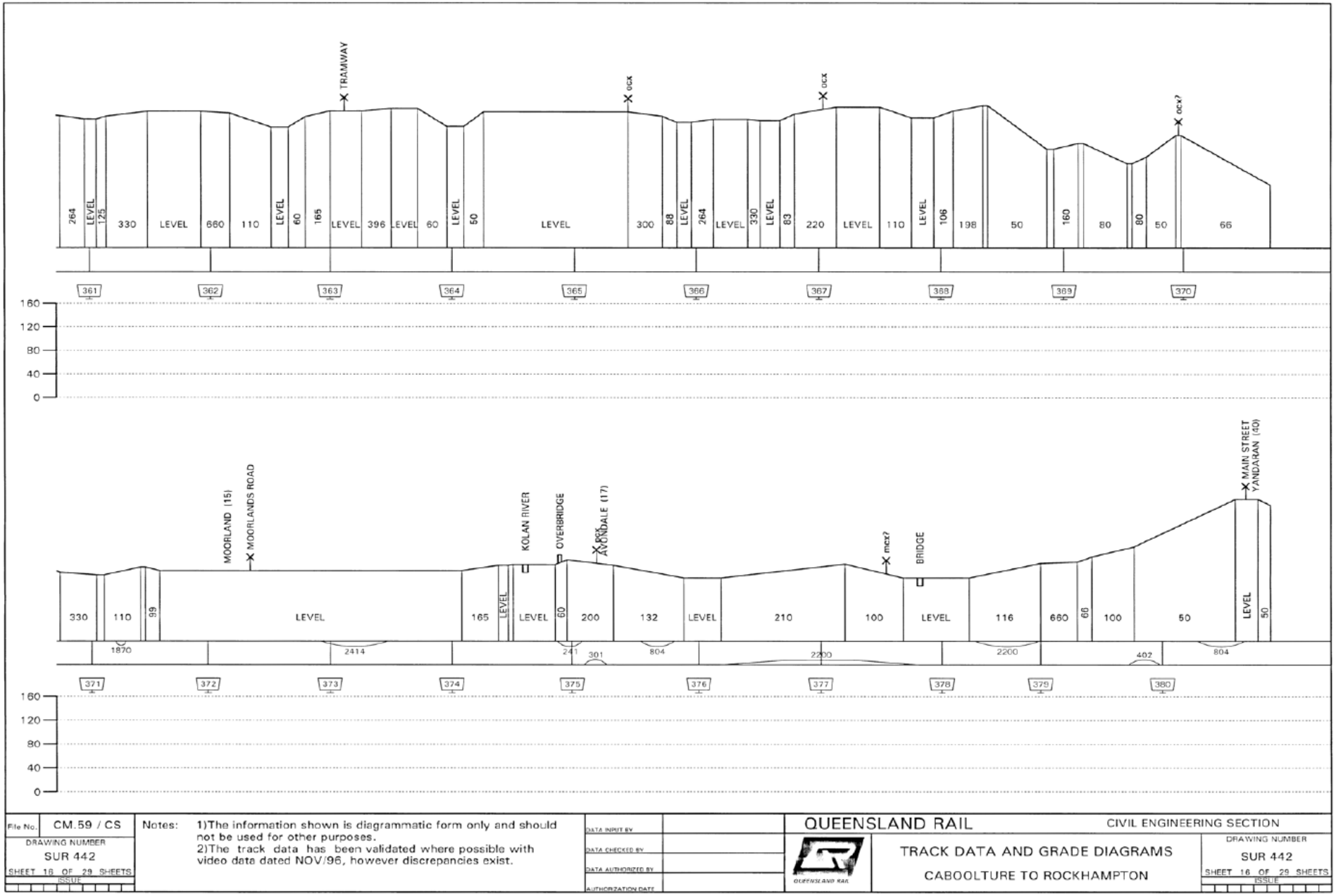


File No. CM.59 / CS DRAWING NUMBER SUR 442 SHEET 13 OF 29 SHEETS ISSUE	Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes. 2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.	DATA INPUT BY DATA CHECKED BY DATA AUTHORIZED BY AUTHORIZATION DATE	QUEENSLAND RAIL CIVIL ENGINEERING SECTION TRACK DATA AND GRADE DIAGRAMS CABOOLTURE TO ROCKHAMPTON DRAWING NUMBER SUR 442 SHEET 13 OF 29 SHEETS ISSUE


BRIDGE
BRIDGE
HORSE SHOE CK
OCK?
KINKUNA (30)
741 588 408 645 4000 714 465 168 LEVEL 99 690 1333 LEVEL 364 444 LEVEL 185 213 345 1818 625 1000 1818 260 160 LEVEL 1000 LEVEL 1428 385 6667
1593
2000
1100
1100
321 322 323 324 325 326 327 328 329 330
160 120 80 40 0
MCK
ELLIOTT RIVER
OCK
ELLIOTT (28)
OCK
BRIDGE
6667 1053 476 588 2860 1538 LEVEL 339 526 392 2860 606 2860 1667 571 192 2860 690 100 1040 64 LEVEL 1538 6667 4000 1111 1052 LEVEL 5000
1566
2200
850
301
331 332 333 334 335 336 337 338 339 340
160 120 80 40 0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 14 OF 29 SHEETS
ISSUE
Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes.
2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.
DATA INPUT BY
DATA CHECKED BY
DATA AUTHORIZED BY
AUTHORIZATION DATE
QUEENSLAND RAIL
CIVIL ENGINEERING SECTION
QUEENSLAND RAIL
TRACK DATA AND GRADE DIAGRAMS
CABOOLTURE TO ROCKHAMPTON
DRAWING NUMBER SUR 442
SHEET 14 OF 29 SHEETS
ISSUE



File No. CM.59 / CS	Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes. 2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.	DATA INPUT BY	QUEENSLAND RAIL	CIVIL ENGINEERING SECTION	
DRAWING NUMBER SUR 442		DATA CHECKED BY		TRACK DATA AND GRADE DIAGRAMS	DRAWING NUMBER SUR 442
SHEET 15 OF 29 SHEETS ISSUE		DATA AUTHORIZED BY		CABOOLTURE TO ROCKHAMPTON	SHEET 15 OF 29 SHEETS ISSUE
		AUTHORIZATION DATE			


TRAMWAY
OCK
OCK
OCK?
MOORLAND (15)
MOORLANDS ROAD
KOLAN RIVER
OVERBRIDGE
AVONDALE (17)
OCK
MCK?
BRIDGE
MAIN STREET
YANDARAN (40)
LEVEL
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
160
120
80
40
0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 16 OF 29 SHEETS
ISSUE
Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes.
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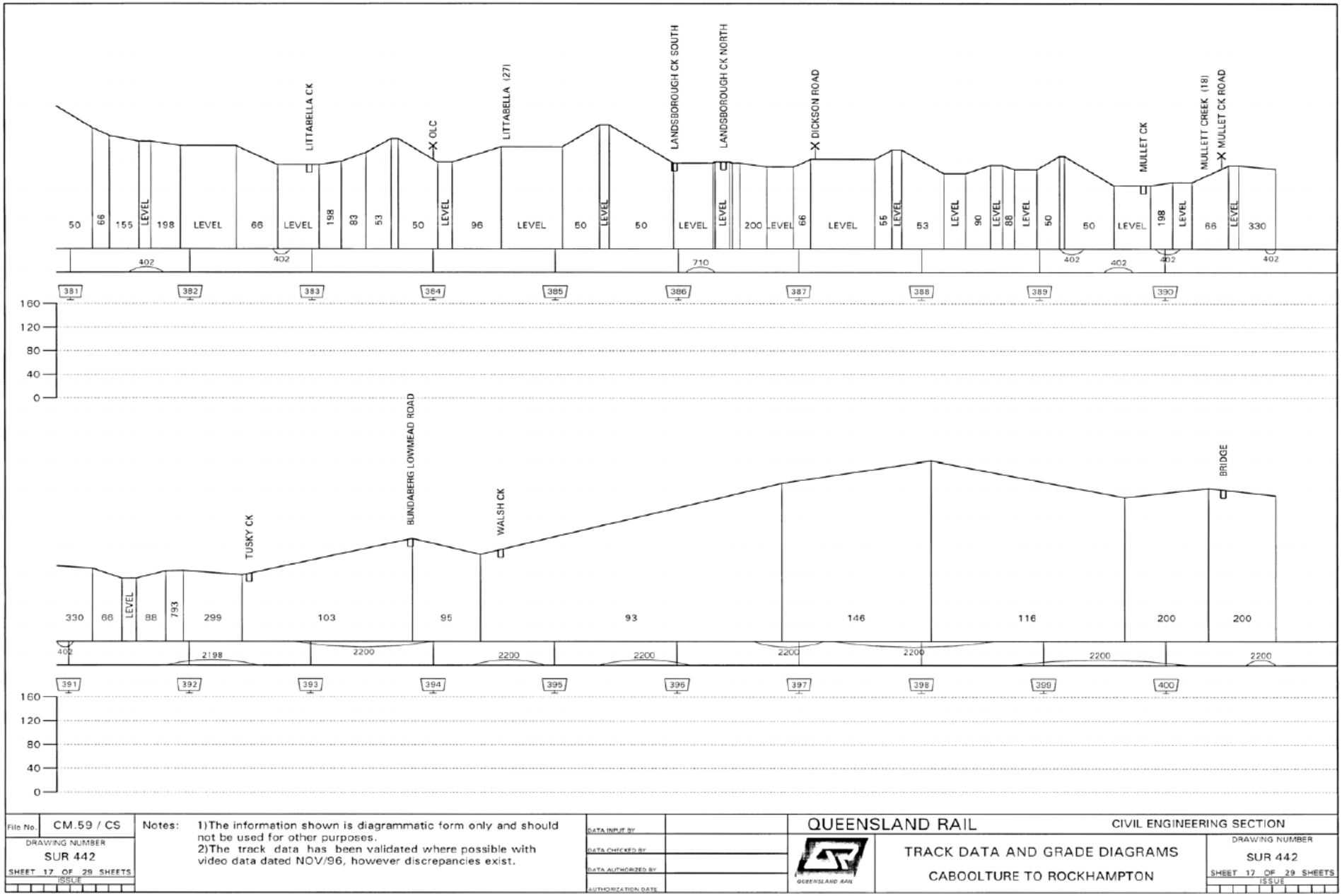
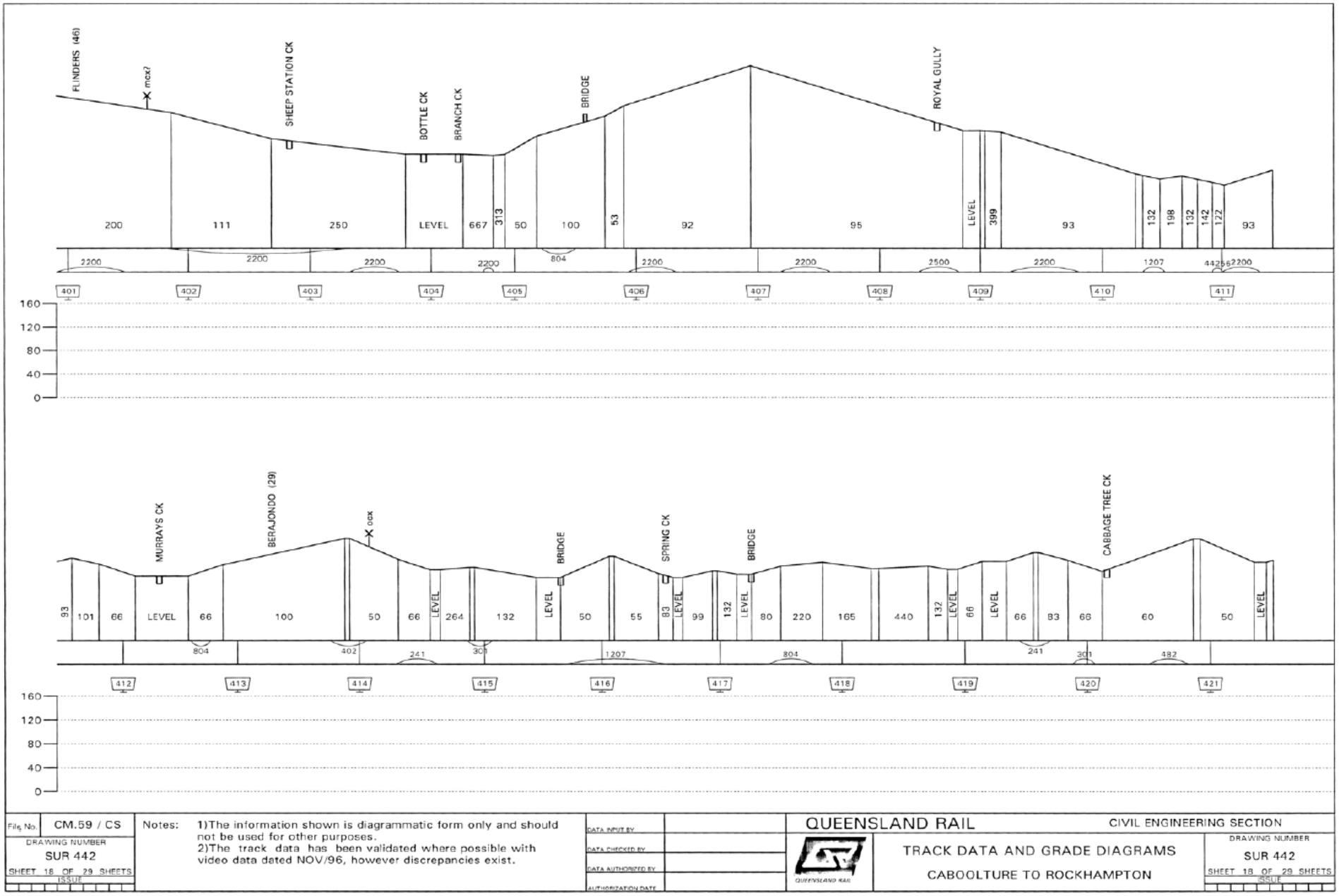
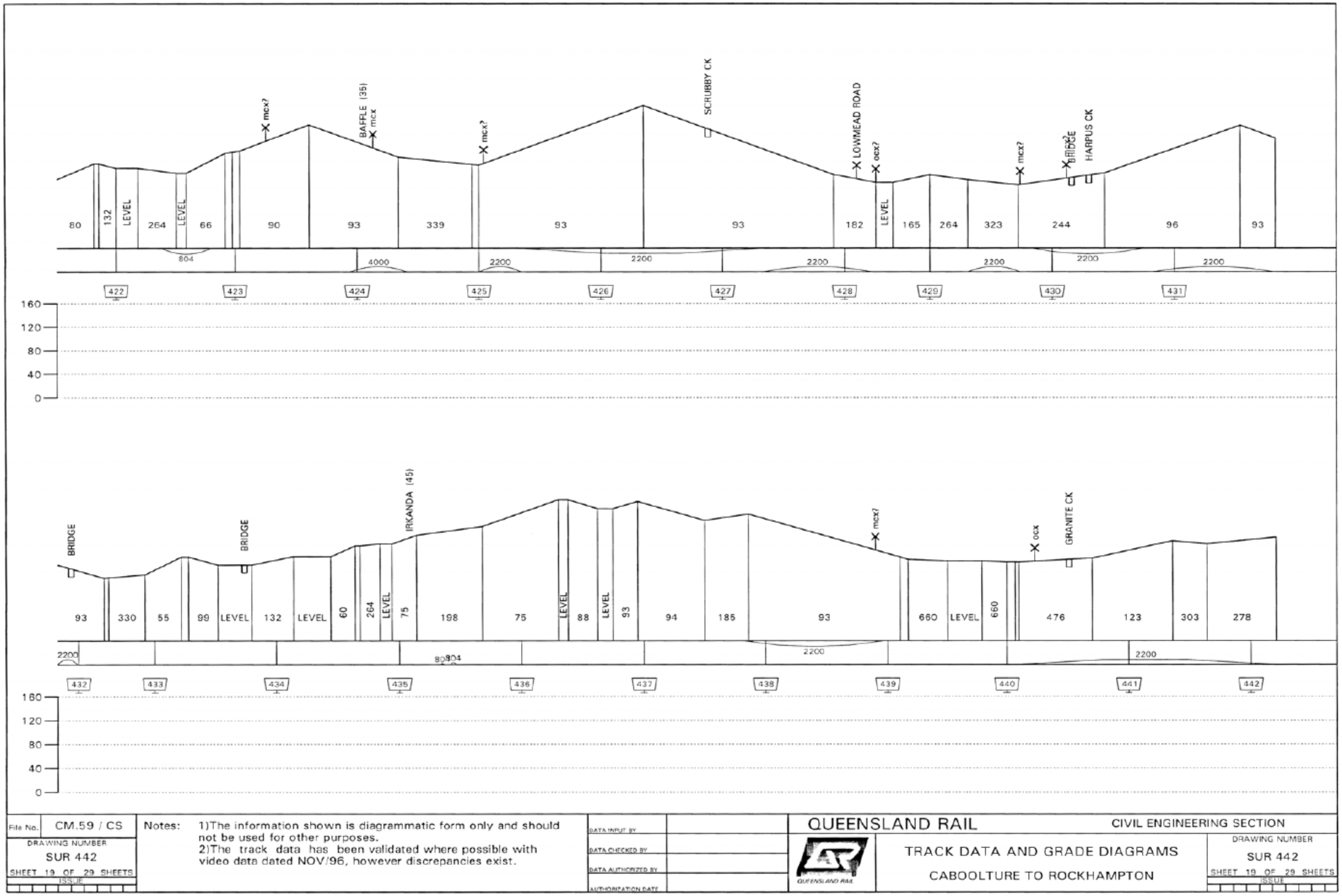
DATA INPUT BY
DATA CHECKED BY
DATA AUTHORIZED BY
AUTHORIZATION DATE
QUEENSLAND RAIL
CIVIL ENGINEERING SECTION
TRACK DATA AND GRADE DIAGRAMS
CABOOLTURE TO ROCKHAMPTON
DRAWING NUMBER SUR 442
SHEET 16 OF 29 SHEETS
ISSUE

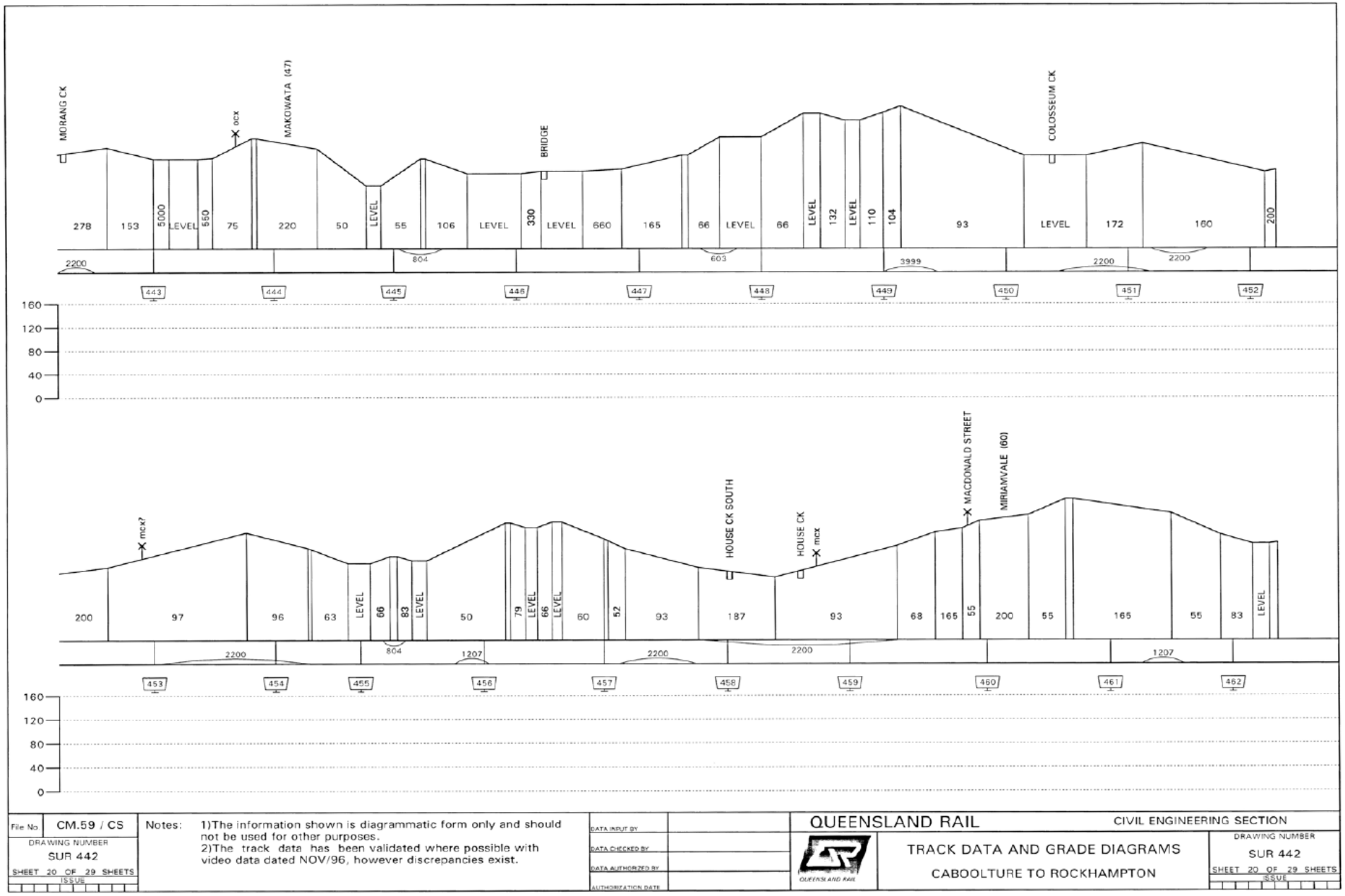


File No. CM.59 / CS DRAWING NUMBER SUR 442 SHEET 17 OF 29 SHEETS ISSUE	Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes. 2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.	DATA INPUT BY DATA CHECKED BY DATA AUTHORIZED BY AUTHORIZATION DATE	QUEENSLAND RAIL QUEENSLAND RAIL	CIVIL ENGINEERING SECTION TRACK DATA AND GRADE DIAGRAMS CABOOLTURE TO ROCKHAMPTON	DRAWING NUMBER SUR 442 SHEET 17 OF 29 SHEETS ISSUE


FLINDERS (46)
mcx?
SHEEP STATION CK
BOTTLE CK
BRANCH CK
BRIDGE
ROYAL GULLY
200
111
250
LEVEL
667
313
50
100
53
92
95
LEVEL
399
93
132
198
132
142
122
93
2200
2200
2200
2200
804
2200
2200
2500
2200
1207
442562200
401
402
403
404
405
406
407
408
409
410
411
160
120
80
40
0
MURRAYS CK
BERAJONDO (29)
ocx
BRIDGE
SPRING CK
BRIDGE
CABBAGE TREE CK
93
101
66
LEVEL
66
100
50
66
LEVEL
264
132
LEVEL
50
55
83
LEVEL
99
132
LEVEL
80
220
165
440
132
LEVEL
66
LEVEL
66
83
66
60
50
LEVEL
804
402
241
301
1207
804
241
301
482
412
413
414
415
416
417
418
419
420
421
160
120
80
40
0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 18 OF 29 SHEETS
ISSUE
Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes.
2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.
DATA INPUT BY
DATA CHECKED BY
DATA AUTHORIZED BY
AUTHORIZATION DATE
QUEENSLAND RAIL
CIVIL ENGINEERING SECTION
TRACK DATA AND GRADE DIAGRAMS
CABOOLTURE TO ROCKHAMPTON
DRAWING NUMBER SUR 442
SHEET 18 OF 29 SHEETS
ISSUE



File No. CM.59 / CS DRAWING NUMBER SUR 442 SHEET 19 OF 29 SHEETS ISSUE	Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes. 2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.	DATA INPUT BY DATA CHECKED BY DATA AUTHORIZED BY AUTHORIZATION DATE	QUEENSLAND RAIL QUEENSLAND RAIL	CIVIL ENGINEERING SECTION TRACK DATA AND GRADE DIAGRAMS CABOOLTURE TO ROCKHAMPTON	DRAWING NUMBER SUR 442 SHEET 19 OF 29 SHEETS ISSUE


MORANG CK
MAKOWATA (47)
BRIDGE
COLOSSEUM CK
278 153 5000 LEVEL 550 75 220 50 LEVEL 55 106 LEVEL 330 LEVEL 660 165 66 LEVEL 66 LEVEL 132 LEVEL 110 104 93 LEVEL 172 160 200
2200 804 603 3999 2200 2200
443 444 445 446 447 448 449 450 451 452
160 120 80 40 0
HOUSE CK SOUTH
HOUSE CK
MACDONALD STREET
MIRIAMVALE (60)
200 97 96 63 LEVEL 66 83 LEVEL 50 79 LEVEL 66 LEVEL 60 52 93 187 93 68 165 55 200 55 165 55 83 LEVEL
2200 804 1207 2200 2200 1207
453 454 455 456 457 458 459 460 461 462
160 120 80 40 0
File No CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 20 OF 29 SHEETS
ISSUE
Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes.
2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.
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DATA CHECKED BY
DATA AUTHORIZED BY
AUTHORIZATION DATE
QUEENSLAND RAIL
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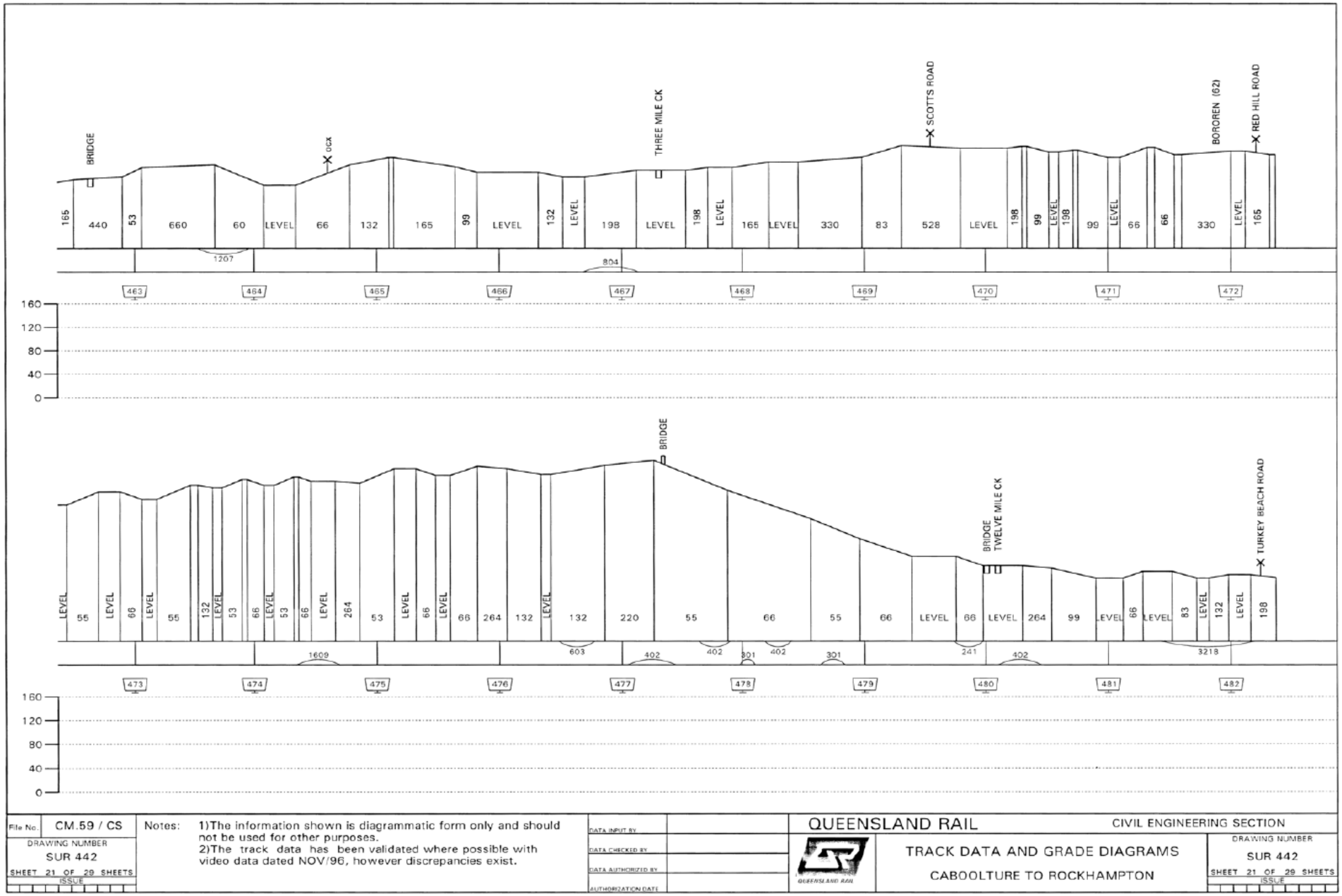
TRACK DATA AND GRADE DIAGRAMS
CABOOLTURE TO ROCKHAMPTON
DRAWING NUMBER SUR 442
SHEET 20 OF 29 SHEETS
ISSUE


BRIDGE
OCK
THREE MILE CK
SCOTTS ROAD
BORDEN (62)
RED HILL ROAD
165 440 53 660 60 LEVEL 66 132 165 99 LEVEL 132 LEVEL 198 LEVEL 198 LEVEL 165 LEVEL 330 83 528 LEVEL 198 99 LEVEL 198 99 LEVEL 66 66 330 LEVEL 165
1207
804
463 464 465 466 467 468 469 470 471 472
160 120 80 40 0
BRIDGE
BRIDGE TWELVE MILE CK
TURKEY BEACH ROAD
LEVEL 55 LEVEL 60 LEVEL 55 132 LEVEL 53 66 LEVEL 53 66 LEVEL 264 53 LEVEL 66 LEVEL 66 264 132 LEVEL 132 220 55 66 55 66 LEVEL 66 LEVEL 264 99 LEVEL 66 LEVEL 83 LEVEL 132 LEVEL 198
1609
603
402
402
301
402
301
241
402
3218
473 474 475 476 477 478 479 480 481 482
160 120 80 40 0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 21 OF 29 SHEETS
ISSUE
Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes.
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DATA INPUT BY
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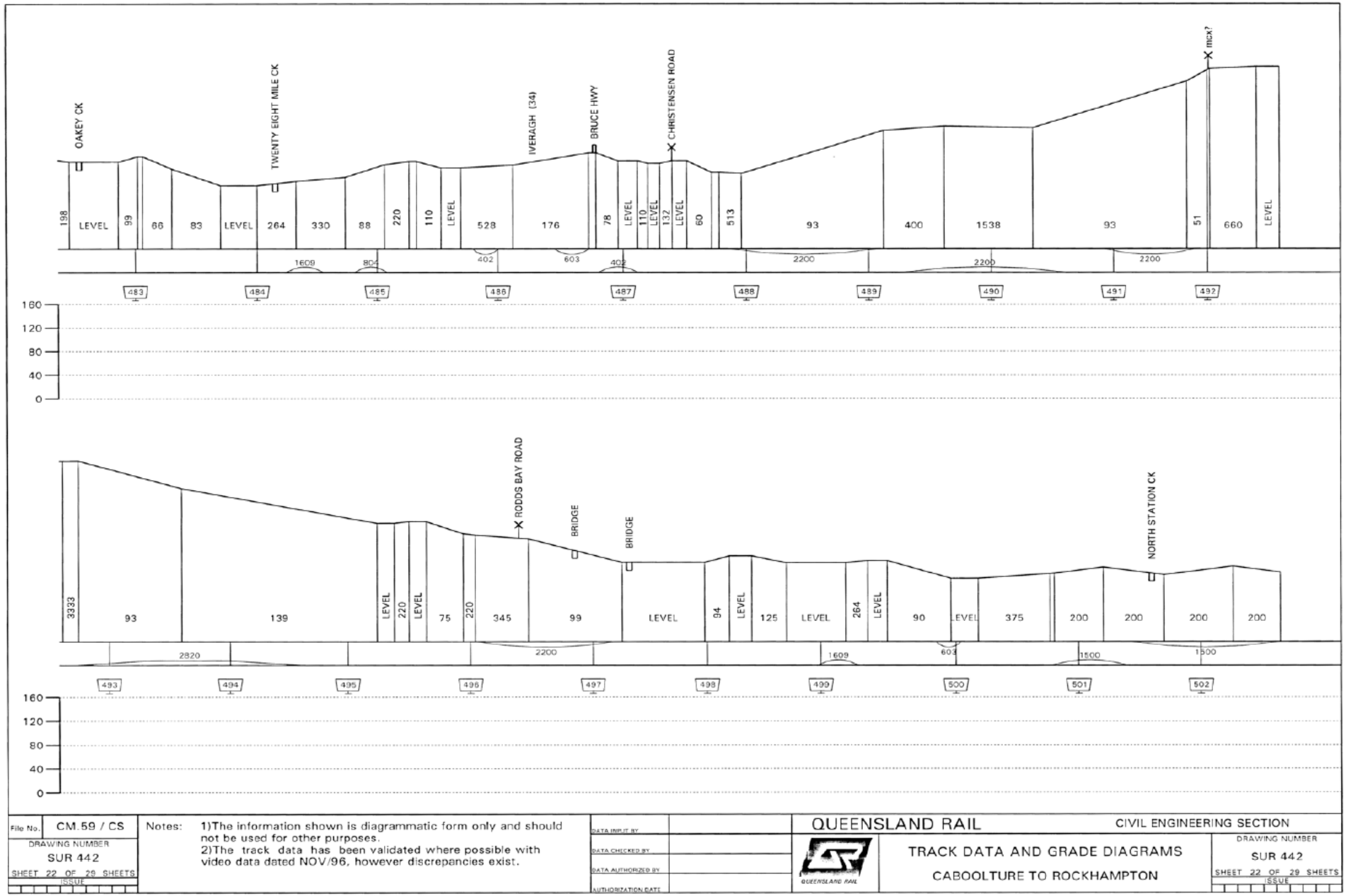
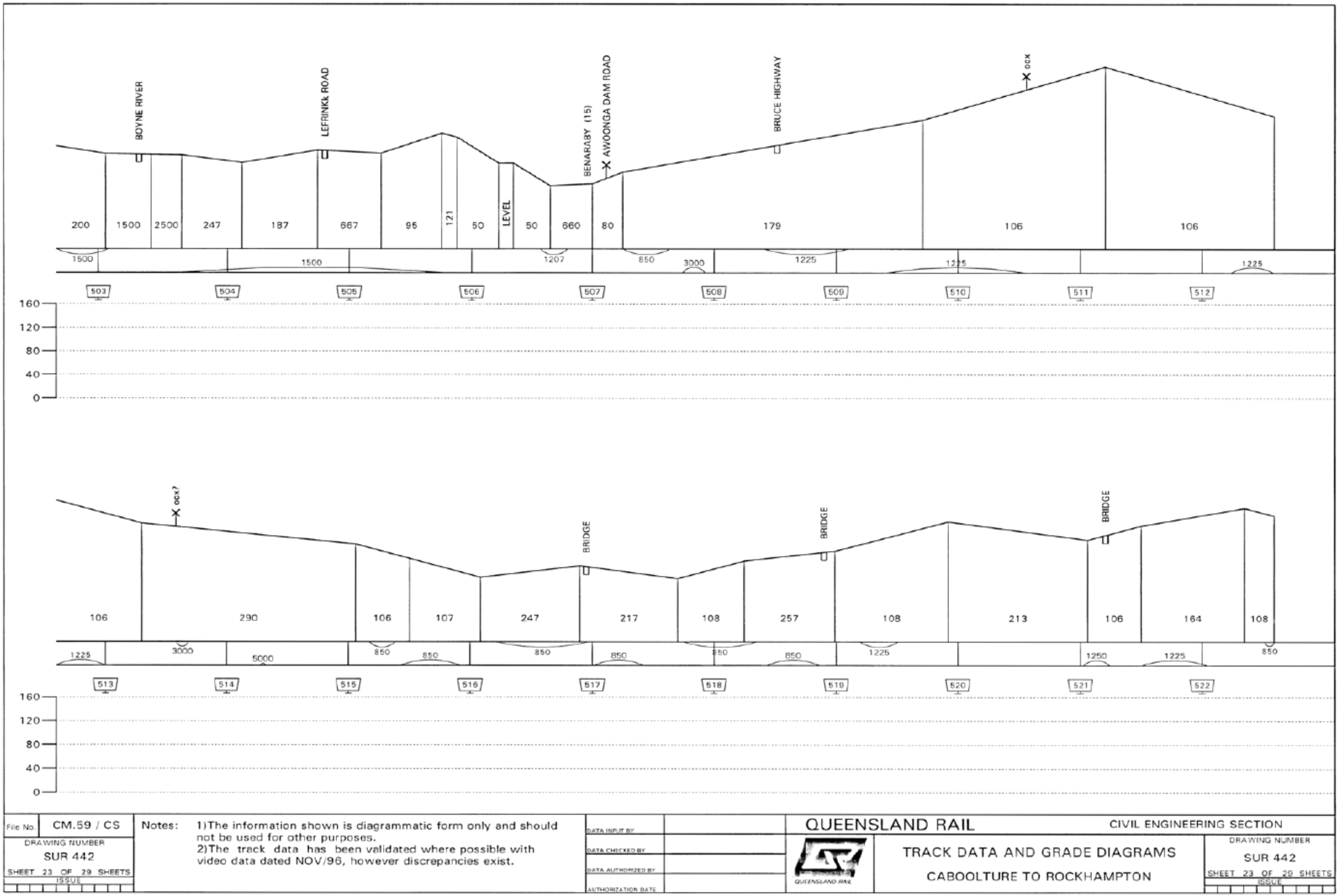
TRACK DATA AND GRADE DIAGRAMS
CABOOLTURE TO ROCKHAMPTON
DRAWING NUMBER SUR 442
SHEET 21 OF 29 SHEETS
ISSUE


OAKEY CK
TWENTY EIGHT MILE CK
IVERAGH (34)
BRUCE HWY
CHRISTENSEN ROAD
RODDS BAY ROAD
BRIDGE
BRIDGE
NORTH STATION CK
198
LEVEL
99
66
83
LEVEL
264
330
88
220
110
LEVEL
528
176
78
LEVEL
110
LEVEL
132
LEVEL
60
513
93
400
1538
93
51
660
LEVEL
1609
402
603
402
2200
2200
2200
483
484
485
486
487
488
489
490
491
492
160
120
80
40
0
3333
93
139
LEVEL
220
LEVEL
75
220
345
99
LEVEL
94
LEVEL
125
LEVEL
264
LEVEL
90
LEVEL
375
200
200
200
200
2820
2200
1609
603
1500
1500
493
494
495
496
497
498
499
500
501
502
160
120
80
40
0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 22 OF 29 SHEETS
ISSUE
Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes.
2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.
DATA INPUT BY
DATA CHECKED BY
DATA AUTHORIZED BY
AUTHORIZATION DATE
QUEENSLAND RAIL
CIVIL ENGINEERING SECTION
QUEENSLAND RAIL
TRACK DATA AND GRADE DIAGRAMS
CABOOLTURE TO ROCKHAMPTON
DRAWING NUMBER SUR 442
SHEET 22 OF 29 SHEETS
ISSUE


BOYNE RIVER
LEFRINKk ROAD
BENARABY (15)
AWOONGA DAM ROAD
BRUCE HIGHWAY
OCK
LEVEL
200 1500 2500 247 187 667 95 121 50 50 660 80 179 106 106
1500 1500 1207 850 3000 1225 1225 1225
503 504 505 506 507 508 509 510 511 512
160 120 80 40 0
OCK
BRIDGE
BRIDGE
BRIDGE
106 290 106 107 247 217 108 257 108 213 106 164 108
1225 3000 5000 850 850 850 850 850 850 1225 1250 1225 850
513 514 515 516 517 518 519 520 521 522
160 120 80 40 0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 23 OF 29 SHEETS
ISSUE
Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes.
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DATA INPUT BY
DATA CHECKED BY
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AUTHORIZATION DATE
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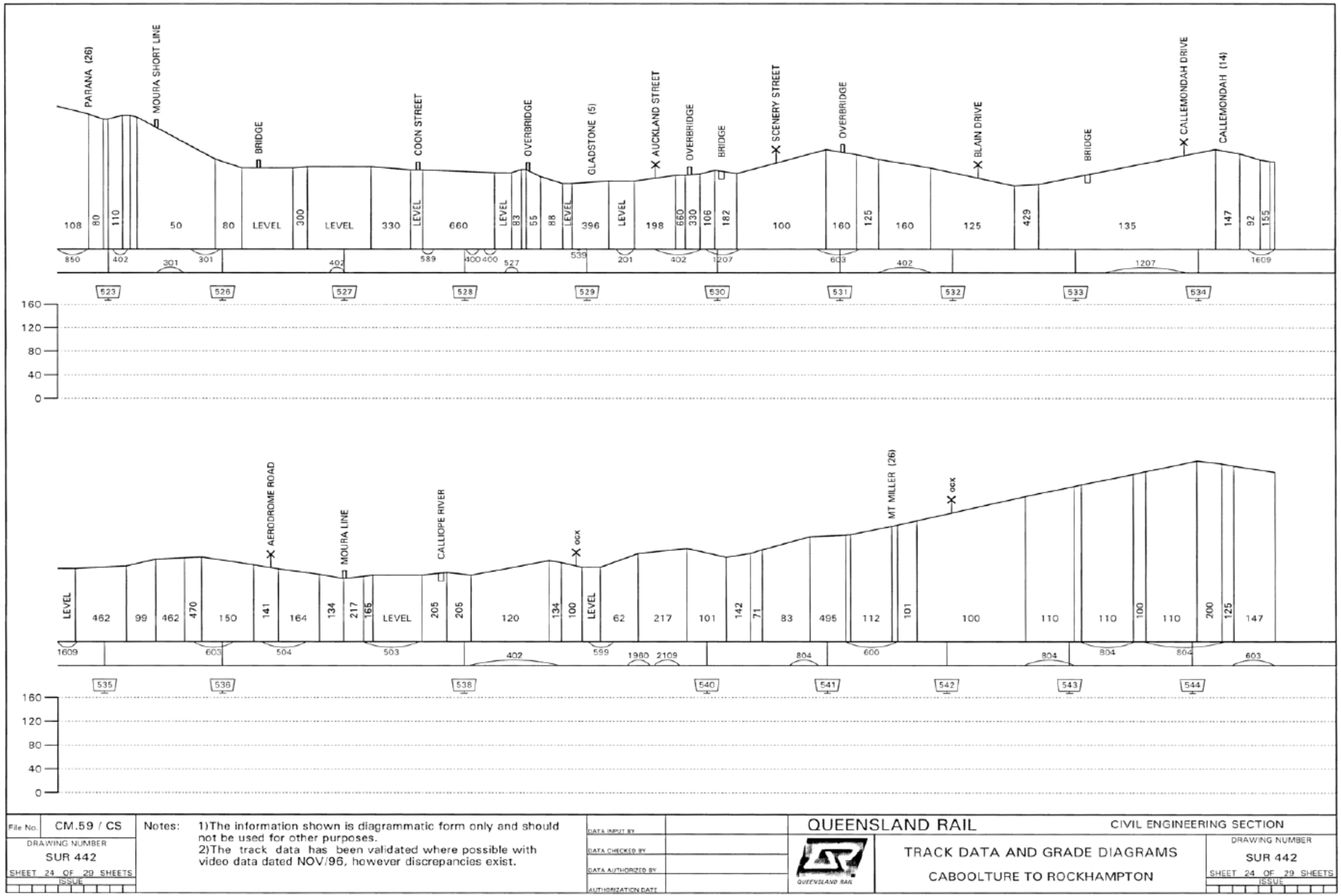
TRACK DATA AND GRADE DIAGRAMS
CABOOLTURE TO ROCKHAMPTON
DRAWING NUMBER SUR 442
SHEET 23 OF 29 SHEETS
ISSUE


PARANA (26)
MOURA SHORT LINE
BRIDGE
COON STREET
OVERBRIDGE
GLADSTONE (5)
AUCKLAND STREET
OVERBRIDGE
BRIDGE
SCENERY STREET
OVERBRIDGE
BLAIN DRIVE
BRIDGE
CALLEMONDAH DRIVE
CALLEMONDAH (14)
AERODROME ROAD
MOURA LINE
CALLIOPE RIVER
MT MILLER (26)
160
120
80
40
0
File No. CM.59 / CS
DRAWING NUMBER SUR 442
SHEET 24 OF 29 SHEETS
ISSUE
Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes.
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DATA INPUT BY
DATA CHECKED BY
DATA AUTHORIZED BY
AUTHORIZATION DATE
QUEENSLAND RAIL
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TRACK DATA AND GRADE DIAGRAMS
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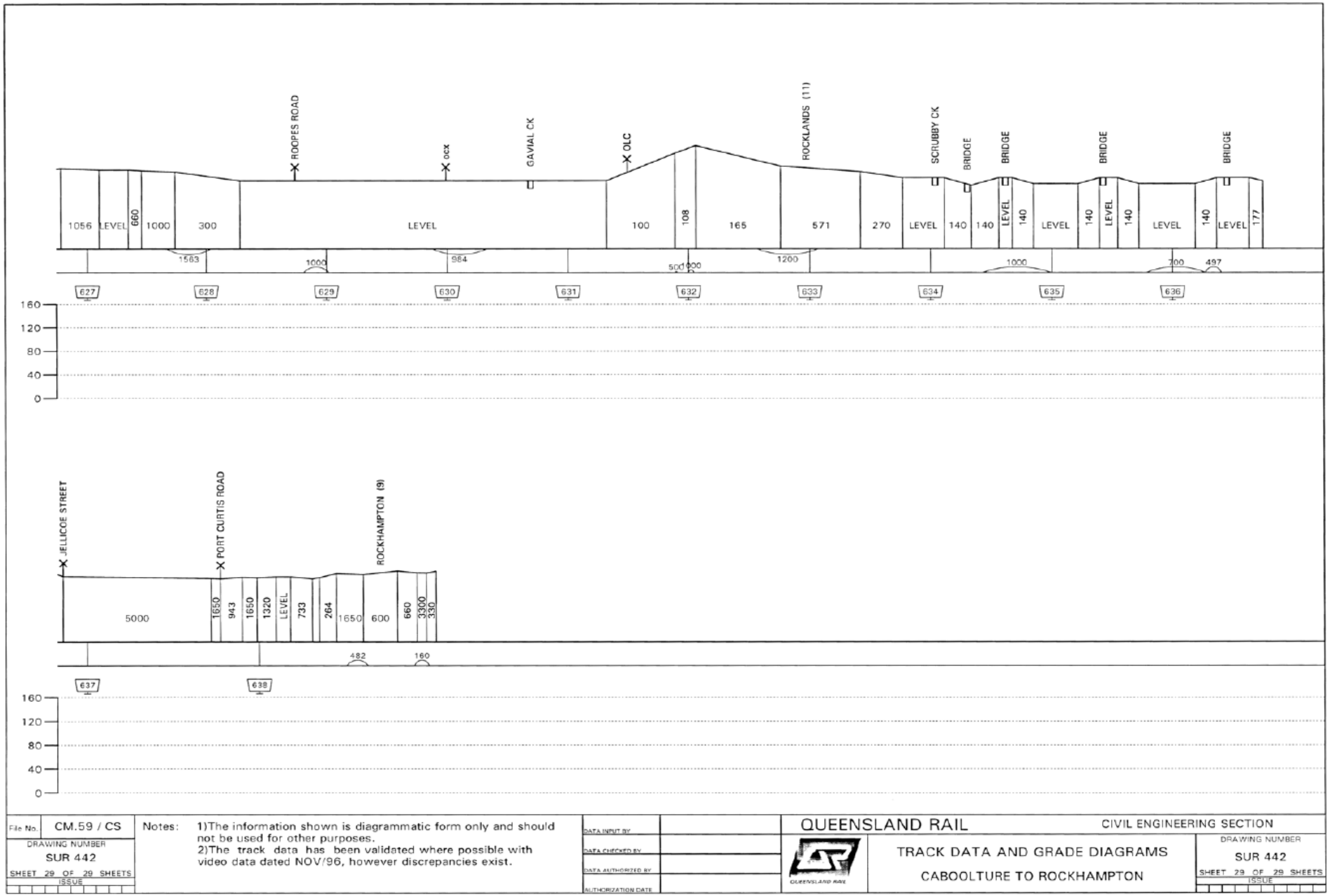
DRAWING NUMBER SUR 442
SHEET 24 OF 29 SHEETS
ISSUE



File No. CM.59 / CS	Notes: 1)The information shown is diagrammatic form only and should not be used for other purposes. 2)The track data has been validated where possible with video data dated NOV/96, however discrepancies exist.	DATA INPUT BY	QUEENSLAND RAIL — CIVIL ENGINEERING SECTION
DRAWING NUMBER SUR 442		DATA CHECKED BY	TRACK DATA AND GRADE DIAGRAMS
SHEET 29 OF 29 SHEETS		DATA AUTHORIZED BY	CABOOLTURE TO ROCKHAMPTON
ISSUE		AUTHORIZATION DATE	DRAWING NUMBER SUR 442 SHEET 29 OF 29 SHEETS ISSUE

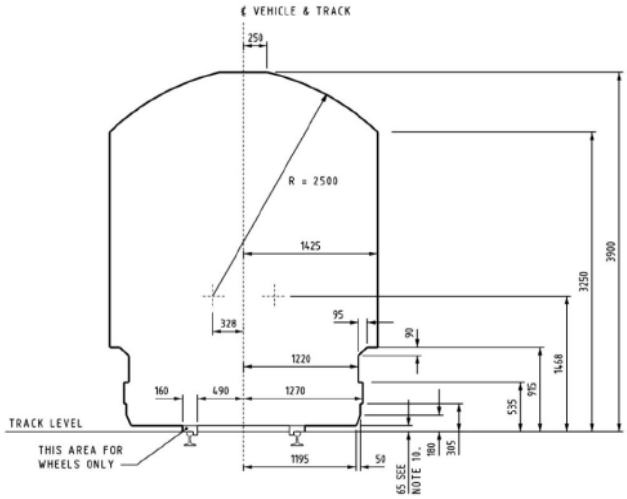
APPENDIX F Sectional Running Times

		80k_Freight	
Location	**Location**	**Up**	**Down**
Nambour	Yandina	9	9
Yandina	North Arm	6	5
North Arm	Eumundi	4	6
Eumundi	Sunrise	2	2
Sunrise	Cooroy	6	7
Cooroy	Pomona	9	8
Pomona	Cooran	7	7
Cooran	Traveston	6	6
Traveston	Woondum	7	7
Woondum	Glanmire	8	8
Glanmire	Gympie North	4	4
Gympie North	Tamaree	3	5
Tamaree	Harvey's Siding	6	9
Harvey's Siding	Curra	5	5
Curra	Theebine	9	9
Theebine	Paterson	6	6
Paterson	Gundiah	6	7
Gundiah	Netherby	4	5
Netherby	Tiaro	7	6
Tiaro	Owanyilla	10	7
Owanyilla	Mungar	11	9
Mungar	Yengarie	6	6
Yengarie	Maryborough West	9	9
Maryborough West	Colton	9	10
Colton	Torbanlea	7	7
Torbanlea	Howard	4	4
Howard	Wokka	7	7
Wokka	Isis Junction	5	5
Isis Junction	Goodwood	7	7
Goodwood	Kinkuna	7	7
Kinkuna	Elliott	7	6
Elliott	Bundaberg	12	14
Bundaberg	Meadowvale	16	17
Meadowvale	Avondale	13	11
Avondale	Littabella	8	8
Littabella	Flinders	15	17
Flinders	Berajondo	10	13

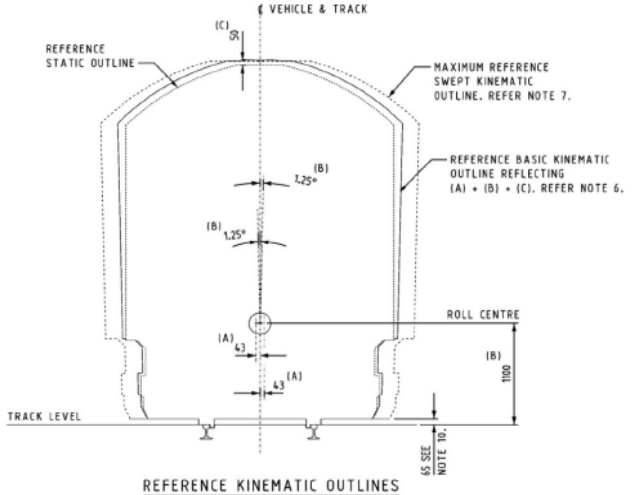
		80k_Freight	
Location	**Location**	**Up**	**Down**
Berajondo	Baffle	9	10
Baffle	Irkanda	7	6
Irkanda	Netley	11	8
Netley	Miriam Vale	11	9
Miriam Vale	Bororen	8	8
Bororen	Iveragh	13	12
Iveragh	Benaraby	16	15
Benaraby	Parana	9	10
Parana	Gladstone	11	9
Rocklands	Rockhampton	10	11
Gympie North	Gympie	10	10
Maryborough West	Maryborough	10	10

APPENDIX G Rollingstock Outlines

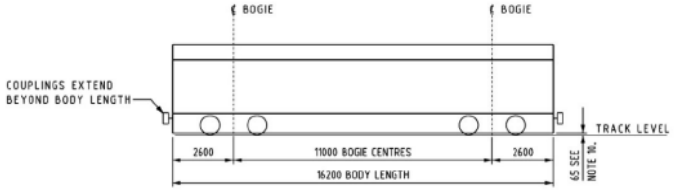
Reference Rolling Stock Outline RS1



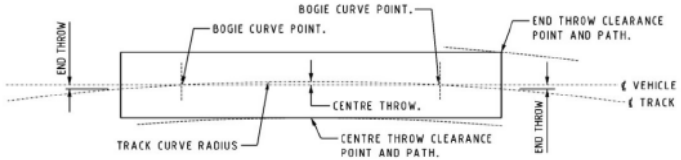
REFERENCE STATIC OUTLINE



REFERENCE KINEMATIC OUTLINES



REFERENCE VEHICLE SIDE ELEVATION - OUTLINE



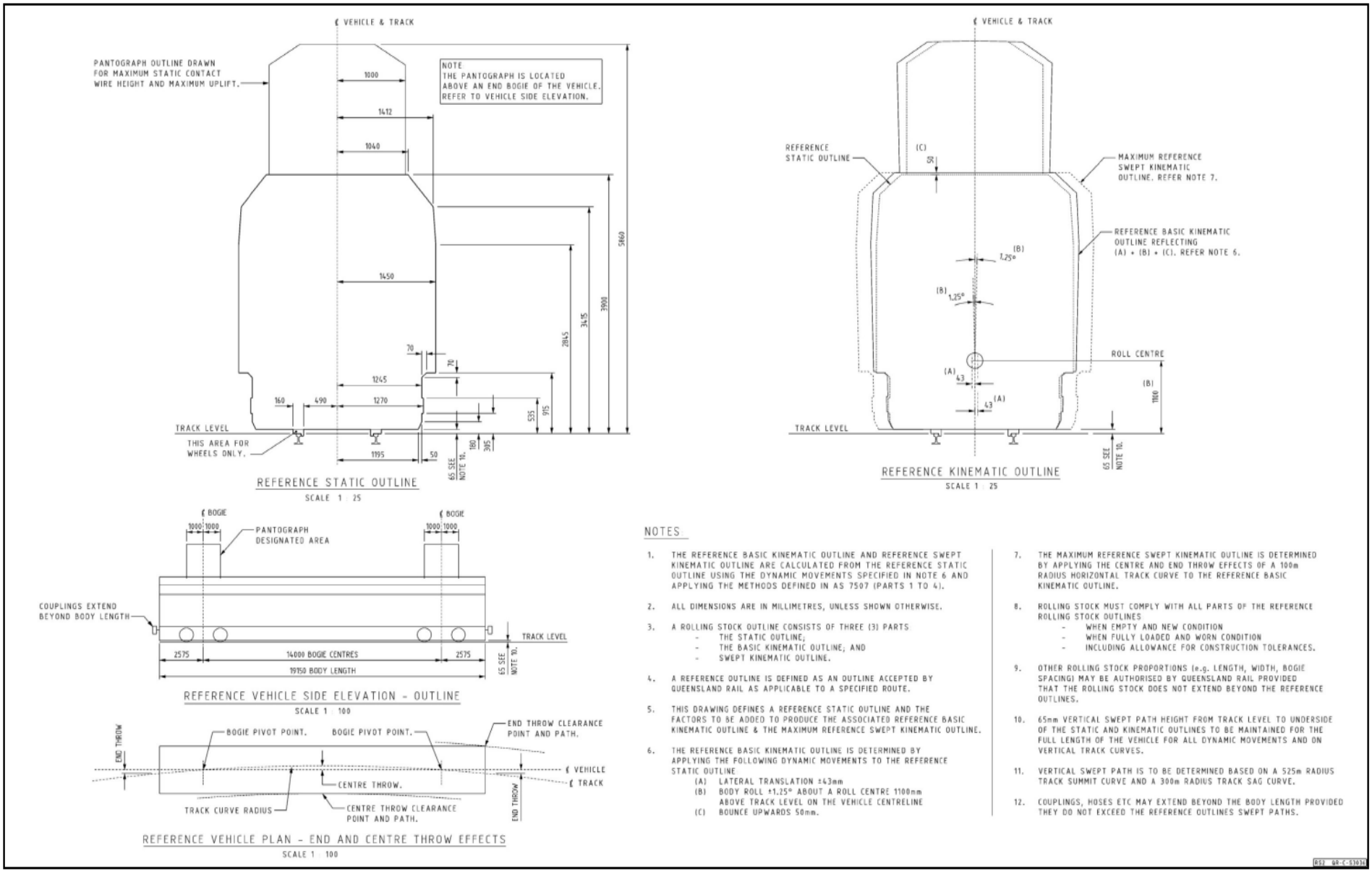
REFERENCE VEHICLE PLAN - END AND CENTRE THROW EFFECTS

NOTES

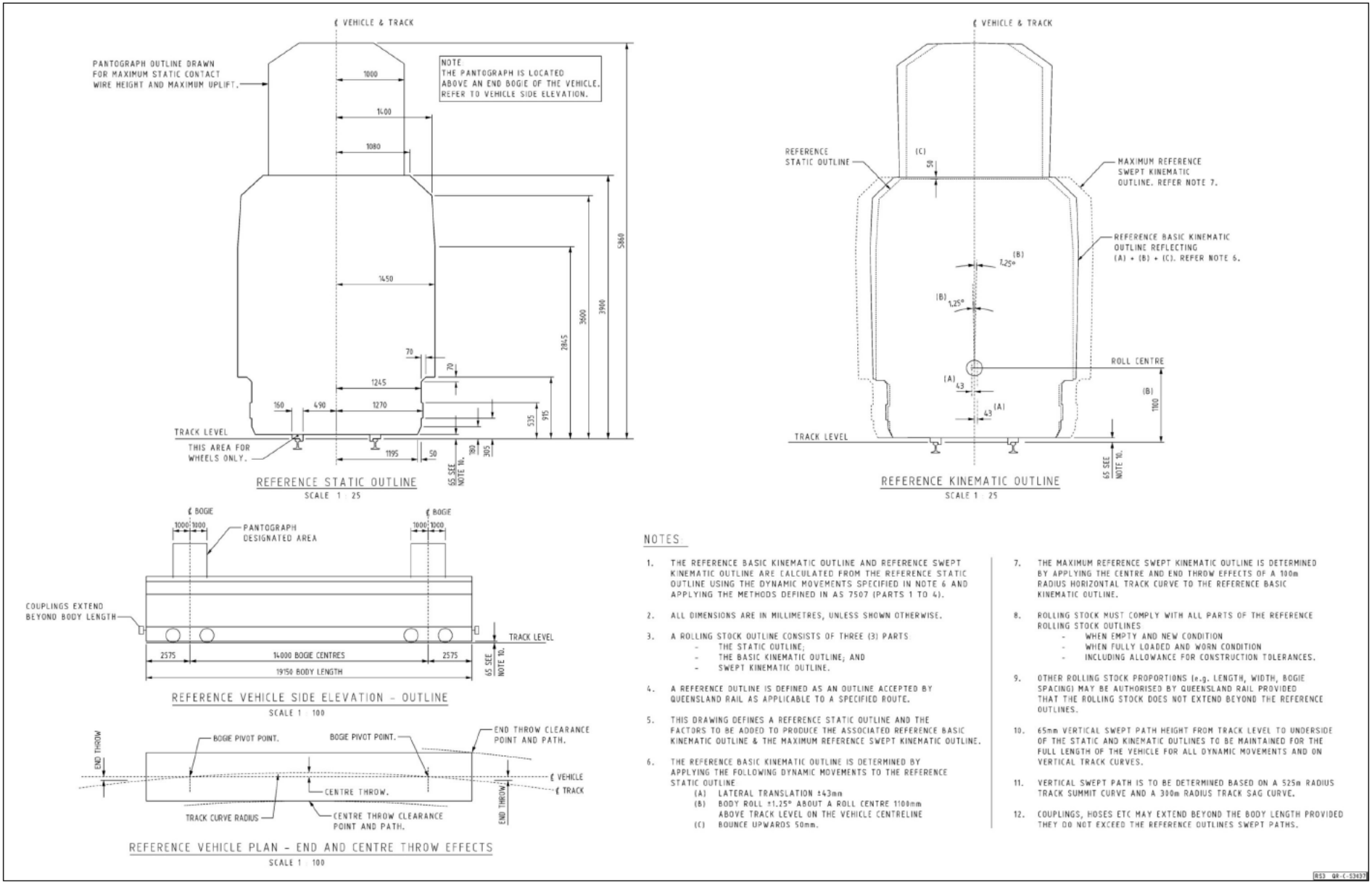
1. THE REFERENCE BASIC KINEMATIC OUTLINE AND REFERENCE SWEPT KINEMATIC OUTLINE ARE CALCULATED FROM THE REFERENCE STATIC OUTLINE USING THE DYNAMIC MOVEMENTS SPECIFIED IN NOTE 6 AND APPLYING THE METHODS DEFINED IN AS 7507 (PARTS 1 TO 4).
2. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS SHOWN OTHERWISE.
3. A ROLLING STOCK OUTLINE CONSISTS OF THREE (3) PARTS
   - THE STATIC OUTLINE;
   - THE BASIC KINEMATIC OUTLINE; AND
   - SWEPT KINEMATIC OUTLINE.
4. A REFERENCE OUTLINE IS DEFINED AS AN OUTLINE ACCEPTED BY QUEENSLAND RAIL AS APPLICABLE TO A SPECIFIED ROUTE.
5. THIS DRAWING DEFINES A REFERENCE STATIC OUTLINE AND THE FACTORS TO BE ADDED TO PRODUCE THE ASSOCIATED REFERENCE BASIC KINEMATIC OUTLINE & THE MAXIMUM REFERENCE SWEPT KINEMATIC OUTLINE.
6. THE REFERENCE BASIC KINEMATIC OUTLINE IS DETERMINED BY APPLYING THE FOLLOWING DYNAMIC MOVEMENTS TO THE REFERENCE STATIC OUTLINE
   (A) LATERAL TRANSLATION ±43mm
   (B) BODY ROLL ±1.25° ABOUT A ROLL CENTRE 1100mm ABOVE TRACK LEVEL ON THE VEHICLE CENTRELINE
   (C) BOUNCE UPWARDS 50mm.
7. THE MAXIMUM REFERENCE SWEPT KINEMATIC OUTLINE IS DETERMINED BY APPLYING THE CENTRE AND END THROW EFFECTS OF A 100m RADIUS HORIZONTAL TRACK CURVE TO THE REFERENCE BASIC KINEMATIC OUTLINE.
8. ROLLING STOCK MUST COMPLY WITH ALL PARTS OF THE REFERENCE ROLLING STOCK OUTLINES
   - WHEN EMPTY AND NEW CONDITION
   - WHEN FULLY LOADED AND WORN CONDITION
   - INCLUDING ALLOWANCE FOR CONSTRUCTION TOLERANCES.
9. OTHER ROLLING STOCK PROPORTIONS (e.g. LENGTH, WIDTH, BOGIE SPACING) MAY BE AUTHORISED BY QUEENSLAND RAIL PROVIDED THAT THE ROLLING STOCK DOES NOT EXTEND BEYOND THE REFERENCE OUTLINES.
10. 65mm VERTICAL SWEPT PATH HEIGHT FROM TRACK LEVEL TO UNDERSIDE OF THE STATIC AND KINEMATIC OUTLINES TO BE MAINTAINED FOR THE FULL LENGTH OF THE VEHICLE FOR ALL DYNAMIC MOVEMENTS AND ON VERTICAL TRACK CURVES.
11. VERTICAL SWEPT PATH IS TO BE DETERMINED BASED ON A 525m RADIUS TRACK SUMMIT CURVE AND A 300m RADIUS TRACK SAG CURVE.
12. COUPLINGS, HOSES ETC MAY EXTEND BEYOND THE BODY LENGTH PROVIDED THEY DO NOT EXCEED THE REFERENCE OUTLINES SWEPT PATHS.

RS1 QR-C-51035

Reference Rolling Stock Outline RS2



Reference Rolling Stock Outline RS3

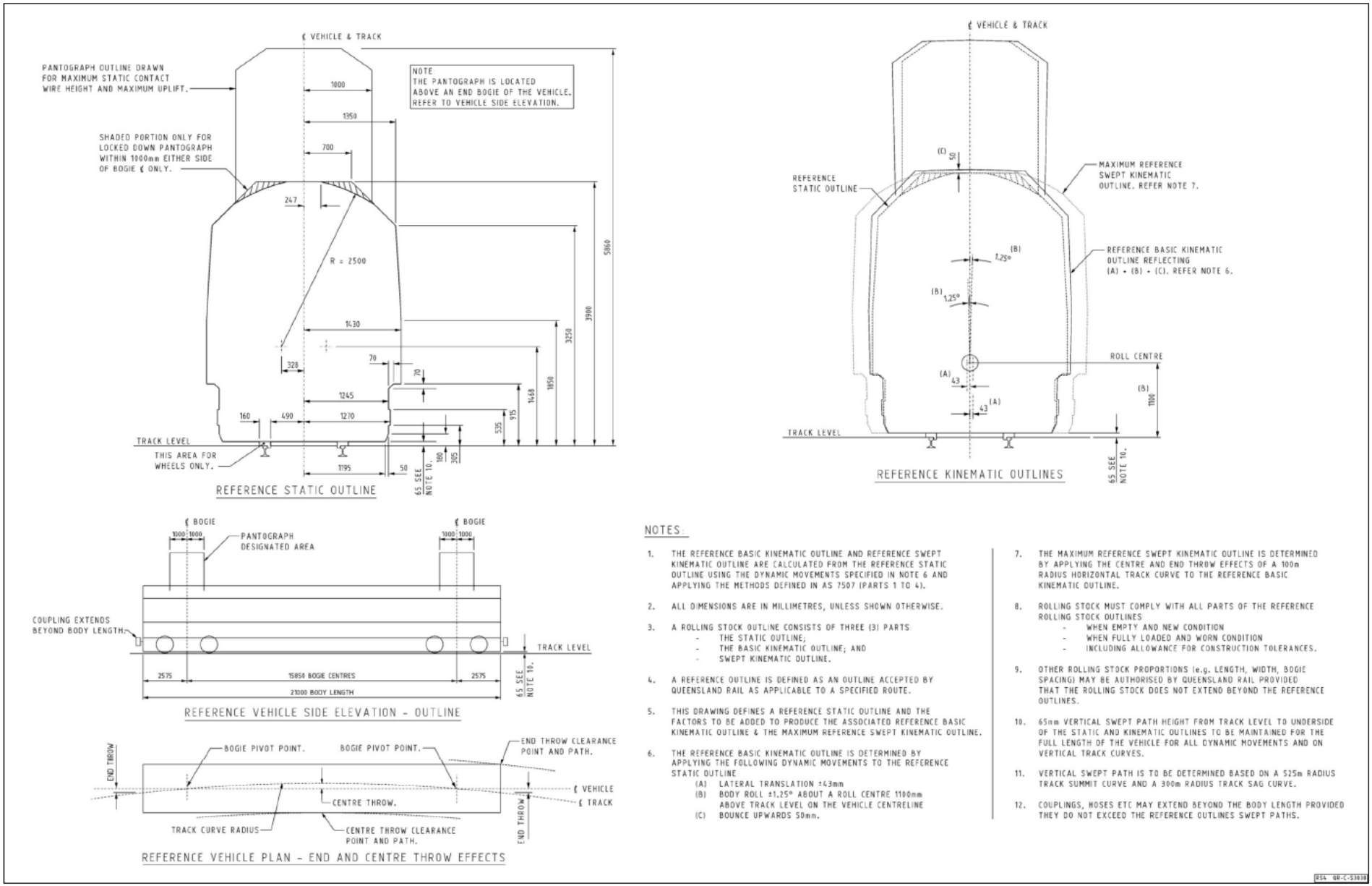


NOTES

1. THE REFERENCE BASIC KINEMATIC OUTLINE AND REFERENCE SWEPT KINEMATIC OUTLINE ARE CALCULATED FROM THE REFERENCE STATIC OUTLINE USING THE DYNAMIC MOVEMENTS SPECIFIED IN NOTE 6 AND APPLYING THE METHODS DEFINED IN AS 7507 (PARTS 1 TO 4).
2. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS SHOWN OTHERWISE.
3. A ROLLING STOCK OUTLINE CONSISTS OF THREE (3) PARTS:
   - THE STATIC OUTLINE;
   - THE BASIC KINEMATIC OUTLINE; AND
   - SWEPT KINEMATIC OUTLINE.
4. A REFERENCE OUTLINE IS DEFINED AS AN OUTLINE ACCEPTED BY QUEENSLAND RAIL AS APPLICABLE TO A SPECIFIED ROUTE.
5. THIS DRAWING DEFINES A REFERENCE STATIC OUTLINE AND THE FACTORS TO BE ADDED TO PRODUCE THE ASSOCIATED REFERENCE BASIC KINEMATIC OUTLINE & THE MAXIMUM REFERENCE SWEPT KINEMATIC OUTLINE.
6. THE REFERENCE BASIC KINEMATIC OUTLINE IS DETERMINED BY APPLYING THE FOLLOWING DYNAMIC MOVEMENTS TO THE REFERENCE STATIC OUTLINE
   (A) LATERAL TRANSLATION ±43mm
   (B) BODY ROLL ±1.25° ABOUT A ROLL CENTRE 1100mm ABOVE TRACK LEVEL ON THE VEHICLE CENTRELINE
   (C) BOUNCE UPWARDS 50mm.
7. THE MAXIMUM REFERENCE SWEPT KINEMATIC OUTLINE IS DETERMINED BY APPLYING THE CENTRE AND END THROW EFFECTS OF A 100m RADIUS HORIZONTAL TRACK CURVE TO THE REFERENCE BASIC KINEMATIC OUTLINE.
8. ROLLING STOCK MUST COMPLY WITH ALL PARTS OF THE REFERENCE ROLLING STOCK OUTLINES
   - WHEN EMPTY AND NEW CONDITION
   - WHEN FULLY LOADED AND WORN CONDITION
   - INCLUDING ALLOWANCE FOR CONSTRUCTION TOLERANCES.
9. OTHER ROLLING STOCK PROPORTIONS (e.g. LENGTH, WIDTH, BOGIE SPACING) MAY BE AUTHORISED BY QUEENSLAND RAIL PROVIDED THAT THE ROLLING STOCK DOES NOT EXTEND BEYOND THE REFERENCE OUTLINES.
10. 65mm VERTICAL SWEPT PATH HEIGHT FROM TRACK LEVEL TO UNDERSIDE OF THE STATIC AND KINEMATIC OUTLINES TO BE MAINTAINED FOR THE FULL LENGTH OF THE VEHICLE FOR ALL DYNAMIC MOVEMENTS AND ON VERTICAL TRACK CURVES.
11. VERTICAL SWEPT PATH IS TO BE DETERMINED BASED ON A 525m RADIUS TRACK SUMMIT CURVE AND A 300m RADIUS TRACK SAG CURVE.
12. COUPLINGS, HOSES ETC MAY EXTEND BEYOND THE BODY LENGTH PROVIDED THEY DO NOT EXCEED THE REFERENCE OUTLINES SWEPT PATHS.

RS3 QR-C-53037

Reference Rolling Stock Outline RS4



NOTES:

1. THE REFERENCE BASIC KINEMATIC OUTLINE AND REFERENCE SWEPT KINEMATIC OUTLINE ARE CALCULATED FROM THE REFERENCE STATIC OUTLINE USING THE DYNAMIC MOVEMENTS SPECIFIED IN NOTE 6 AND APPLYING THE METHODS DEFINED IN AS 7507 (PARTS 1 TO 4).
2. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS SHOWN OTHERWISE.
3. A ROLLING STOCK OUTLINE CONSISTS OF THREE (3) PARTS:
   - THE STATIC OUTLINE;
   - THE BASIC KINEMATIC OUTLINE; AND
   - SWEPT KINEMATIC OUTLINE.
4. A REFERENCE OUTLINE IS DEFINED AS AN OUTLINE ACCEPTED BY QUEENSLAND RAIL AS APPLICABLE TO A SPECIFIED ROUTE.
5. THIS DRAWING DEFINES A REFERENCE STATIC OUTLINE AND THE FACTORS TO BE ADDED TO PRODUCE THE ASSOCIATED REFERENCE BASIC KINEMATIC OUTLINE & THE MAXIMUM REFERENCE SWEPT KINEMATIC OUTLINE.
6. THE REFERENCE BASIC KINEMATIC OUTLINE IS DETERMINED BY APPLYING THE FOLLOWING DYNAMIC MOVEMENTS TO THE REFERENCE STATIC OUTLINE
   (A) LATERAL TRANSLATION ±43mm
   (B) BODY ROLL ±1.25° ABOUT A ROLL CENTRE 1100mm ABOVE TRACK LEVEL ON THE VEHICLE CENTRELINE
   (C) BOUNCE UPWARDS 50mm.
7. THE MAXIMUM REFERENCE SWEPT KINEMATIC OUTLINE IS DETERMINED BY APPLYING THE CENTRE AND END THROW EFFECTS OF A 100m RADIUS HORIZONTAL TRACK CURVE TO THE REFERENCE BASIC KINEMATIC OUTLINE.
8. ROLLING STOCK MUST COMPLY WITH ALL PARTS OF THE REFERENCE ROLLING STOCK OUTLINES
   - WHEN EMPTY AND NEW CONDITION
   - WHEN FULLY LOADED AND WORN CONDITION
   - INCLUDING ALLOWANCE FOR CONSTRUCTION TOLERANCES.
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11. VERTICAL SWEPT PATH IS TO BE DETERMINED BASED ON A 525m RADIUS TRACK SUMMIT CURVE AND A 300m RADIUS TRACK SAG CURVE.
12. COUPLINGS, HOSES ETC MAY EXTEND BEYOND THE BODY LENGTH PROVIDED THEY DO NOT EXCEED THE REFERENCE OUTLINES SWEPT PATHS.

RS4 GR-C-S3038